

TADANO CARGO CRANE

MODEL: **TM-ZX1205MH**

CRANE SPECIFICATIONS

MAXIMUM LIFTING CAPACITY 12,000 kg at 1.6 m (8-part line)

CRANE CAPACITY 8,800 kg at 2.5 m (8-part line)

BOOM Five-sectioned, fully powered partly synchronized telescoping boom of pentagonal box construction with 4 sheaves at boom head

- Fully retracted length -----4.48 m
- Fully extended length----- 16.00 m
- Extension speed -----11.5 m in 38 s
- Elevation ----- Elevated by two double-acting Hydraulic cylinders
- Boom raising speed ----- 0° to 80° in 22 s
- Boom point -----4 sheaves

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

- Single line pull ----- 14.96 kN {1,525 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 ----- 4 sheaves

HOOK STOWING DEVICE 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 ----- 2.1 min⁻¹ {rpm}

OUTRIGGERS Hydraulically operated beams and jacks
 Integral with crane frame
 Extended width ----- Min. 2,280 mm
 Mid. 3,900 mm
 Max.5,500 mm

HYDRAULIC SYSTEM Hydraulic pump ----- Single gear pump
 Hydraulic motors -----Axial piston type for winch and slewing
 Control valves ----- Multiple control valves with integral
 safety valves
 Oil tank capacity ----- approx. 90 liters

SAFETY DEVICES Load meter
 Load indicator
 Over-winding alarm
 Anti-two-block device
 Hook safety latch
 Hydraulic safety valves, check valves and holding valves
 Level gauge

OPTIONAL EQUIPMENT Rear outriggers (outrigger beam extension type)
 Rear outriggers (outrigger beam non-extension type)
 Oil cooler

CRANE MASS Approx. 3,500 kg (except mounting parts)

NOTE : Operating speeds of the crane are guaranteed under the condition that the pump
 delivery is 60 L/ min.

RATED LIFTING CAPACITIES (×1,000kg)

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

Table A

4.48 m BOOM								
LOAD RADIUS(m)			1.6 and below	2.5	3.0	3.3	3.5	4.18
CRANE STRENGTH			12.00	8.80	7.00	6.10	5.70	4.70
EMPTY CHASSIS	Extension width of outriggers	Max.	12.00	8.80	7.00	6.10	5.70	4.70
		Mid.	12.00	8.80	6.85	5.45	4.80	3.25
		Min.	10.00	3.80	2.65	2.20	1.95	1.35

7.36 m BOOM										
LOAD RADIUS(m)			2.5 and below	3.0	3.5	4.0	4.5	5.0	6.0	7.06
CRANE STRENGTH			6.10	6.10	5.50	4.90	4.40	3.90	3.10	2.50
EMPTY CHASSIS	Extension width of outriggers	Max.	6.10	6.10	5.50	4.90	4.40	3.65	2.50	1.75
		Mid.	6.10	6.10	4.65	3.50	2.75	2.20	1.50	1.04
		Min.	3.65	2.55	1.85	1.40	1.10	0.85	0.52	0.26

10.24 m BOOM									
LOAD RADIUS(m)			4.5 and below	5.0	6.0	7.0	8.0	9.0	9.94
CRANE STRENGTH			3.30	3.20	2.90	2.50	2.10	1.85	1.55
EMPTY CHASSIS	Extension width of outriggers	Max.	3.30	3.20	2.50	1.75	1.35	1.05	0.85
		Mid.	2.75	2.20	1.50	1.04	0.82	0.62	0.46
		Min.	1.10	0.85	0.52	0.26	0.19	-	-

13.12 m BOOM												
LOAD RADIUS(m)			4.5 and below	5.0	6.0	7.0	8.0	9.0	10.0	11.0	12.0	12.82
CRANE STRENGTH			3.20	3.10	2.70	2.40	2.10	1.75	1.50	1.30	1.10	1.00
EMPTY CHASSIS	Extension width of outriggers	Max.	3.20	3.10	2.50	1.75	1.35	1.05	0.80	0.68	0.60	0.55
		Mid.	2.75	2.20	1.50	1.04	0.82	0.62	0.45	0.37	0.31	0.26

16.00 m BOOM														
LOAD RADIUS(m)			5.0 and below	6.0	7.0	8.0	9.0	10.0	11.0	12.0	13.0	14.0	15.0	15.7
CRANE STRENGTH			2.60	2.40	2.20	1.90	1.70	1.45	1.25	1.10	1.00	0.90	0.80	0.70
EMPTY CHASSIS	Extension width of outriggers	Max.	2.60	2.40	1.75	1.35	1.05	0.80	0.68	0.60	0.53	0.47	0.42	0.39
		Mid.	2.20	1.50	1.04	0.82	0.62	0.45	0.37	0.31	0.25	0.22	0.18	0.15

Table B

4.48 m BOOM								
LOAD RADIUS(m)			1.6 and below	2.5	3.0	3.3	3.5	4.18
CRANE STRENGTH			12.00	8.80	7.00	6.10	5.70	4.70
EMPTY CHASSIS	Extension width of outriggers	Max.	12.00	8.80	7.00	6.10	5.70	4.70
		Mid.	12.00	8.80	7.00	6.10	5.70	4.10
		Min.	12.00	4.65	3.30	2.75	2.45	1.70

7.36 m BOOM										
LOAD RADIUS(m)			2.5 and below	3.0	3.5	4.0	4.5	5.0	6.0	7.06
CRANE STRENGTH			6.10	6.10	5.50	4.90	4.40	3.90	3.10	2.50
EMPTY CHASSIS	Extension width of outriggers	Max.	6.10	6.10	5.50	4.90	4.40	3.90	3.10	2.25
		Mid.	6.10	6.10	5.50	4.40	3.50	2.90	2.05	1.45
		Min.	4.50	3.15	2.35	1.80	1.40	1.15	0.75	0.45

10.24 m BOOM									
LOAD RADIUS(m)			4.5 and below	5.0	6.0	7.0	8.0	9.0	9.94
CRANE STRENGTH			3.30	3.20	2.90	2.50	2.10	1.85	1.55
EMPTY CHASSIS	Extension width of outriggers	Max.	3.30	3.20	2.90	2.25	1.85	1.50	1.20
		Mid.	3.30	2.90	2.05	1.45	1.15	0.90	0.70
		Min.	1.40	1.15	0.75	0.45	0.25	-	-

13.12 m BOOM												
LOAD RADIUS(m)			4.5 and below	5.0	6.0	7.0	8.0	9.0	10.0	11.0	12.0	12.82
CRANE STRENGTH			3.20	3.10	2.70	2.40	2.10	1.75	1.50	1.30	1.10	1.00
EMPTY CHASSIS	Extension width of outriggers	Max.	3.20	3.10	2.70	2.25	1.85	1.50	1.15	0.95	0.80	0.70
		Mid.	3.20	2.90	2.05	1.45	1.15	0.90	0.65	0.50	0.40	0.35

16.00 m BOOM														
LOAD RADIUS(m)			5.0 and below	6.0	7.0	8.0	9.0	10.0	11.0	12.0	13.0	14.0	15.0	15.7
CRANE STRENGTH			2.60	2.40	2.20	1.90	1.70	1.45	1.25	1.10	1.00	0.90	0.80	0.70
EMPTY CHASSIS	Extension width of outriggers	Max.	2.60	2.40	2.20	1.85	1.50	1.15	0.95	0.80	0.68	0.60	0.55	0.50
		Mid.	2.60	2.05	1.45	1.15	0.90	0.65	0.50	0.40	0.33	0.28	0.25	0.22

Table C

4.48 m BOOM								
LOAD RADIUS(m)			1.6 and below	2.5	3.0	3.3	3.5	4.18
CRANE STRENGTH			12.00	8.80	7.00	6.10	5.70	4.70
EMPTY CHASSIS	Extension width of outriggers	Max.	12.00	8.80	7.00	6.10	5.70	4.70
		Mid.	12.00	8.80	7.00	6.10	5.70	4.70
		Min.	12.00	5.50	3.95	3.35	3.00	2.15

7.36 m BOOM										
LOAD RADIUS(m)			2.5 and below	3.0	3.5	4.0	4.5	5.0	6.0	7.06
CRANE STRENGTH			6.10	6.10	5.50	4.90	4.40	3.90	3.10	2.50
EMPTY CHASSIS	Extension width of outriggers	Max.	6.10	6.10	5.50	4.90	4.40	3.90	3.10	2.50
		Mid.	6.10	6.10	5.50	4.90	4.05	3.35	2.40	1.75
		Min.	5.35	3.85	2.90	2.25	1.85	1.50	1.00	0.70

10.24 m BOOM									
LOAD RADIUS(m)			4.5 and below	5.0	6.0	7.0	8.0	9.0	9.94
CRANE STRENGTH			3.30	3.20	2.90	2.50	2.10	1.85	1.55
EMPTY CHASSIS	Extension width of outriggers	Max.	3.30	3.20	2.90	2.50	2.10	1.80	1.45
		Mid.	3.30	3.20	2.40	1.75	1.40	1.10	0.90
		Min.	1.85	1.50	1.00	0.70	0.55	0.40	0.25

13.12 m BOOM												
LOAD RADIUS(m)			4.5 and below	5.0	6.0	7.0	8.0	9.0	10.0	11.0	12.0	12.82
CRANE STRENGTH			3.20	3.10	2.70	2.40	2.10	1.75	1.50	1.30	1.10	1.00
EMPTY CHASSIS	Extension width of outriggers	Max.	3.20	3.10	2.70	2.40	2.10	1.75	1.40	1.20	1.05	0.95
		Mid.	3.20	3.10	2.40	1.75	1.40	1.10	0.85	0.70	0.60	0.55

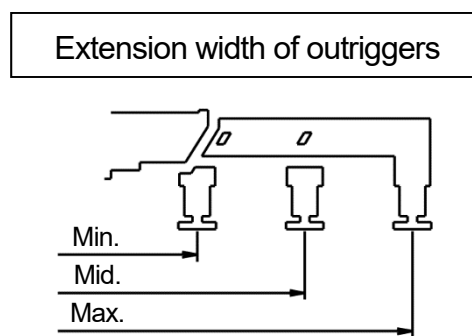
16.00 m BOOM														
LOAD RADIUS(m)			5.0 and below	6.0	7.0	8.0	9.0	10.0	11.0	12.0	13.0	14.0	15.0	15.7
CRANE STRENGTH			2.60	2.40	2.20	1.90	1.70	1.45	1.25	1.10	1.00	0.90	0.80	0.70
EMPTY CHASSIS	Extension width of outriggers	Max.	2.60	2.40	2.20	1.90	1.70	1.40	1.20	1.05	0.90	0.80	0.70	0.65
		Mid.	2.60	2.40	1.75	1.40	1.10	0.85	0.70	0.60	0.53	0.47	0.42	0.40

- NOTES :
1. This value depends on condition that crane is set level on firm level ground.
 2. This value has been calculated on the basis of ISO 15442.
 3. This value includes the mass of lifting devices such as hook block (95 kg).
 4. This load radius shows actual load radius which includes boom deflection.
 5. Rated lifting capacity is in consideration of the loading on the truck bed, and is within the range from the empty chassis rated lifting capacity to the crane strength rated lifting capacity.
 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. When the lifting load is heavier than 6,100 kg, number of part lines must be 8. In case of 6,100 kg or less, number of part lines must be 4. Load per line must not surpass 14.96 kN {1,525 kgf}.
 8. Empty Chassis Rated Capacities table A, B and C depend on the types of chassis.
 9. 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.

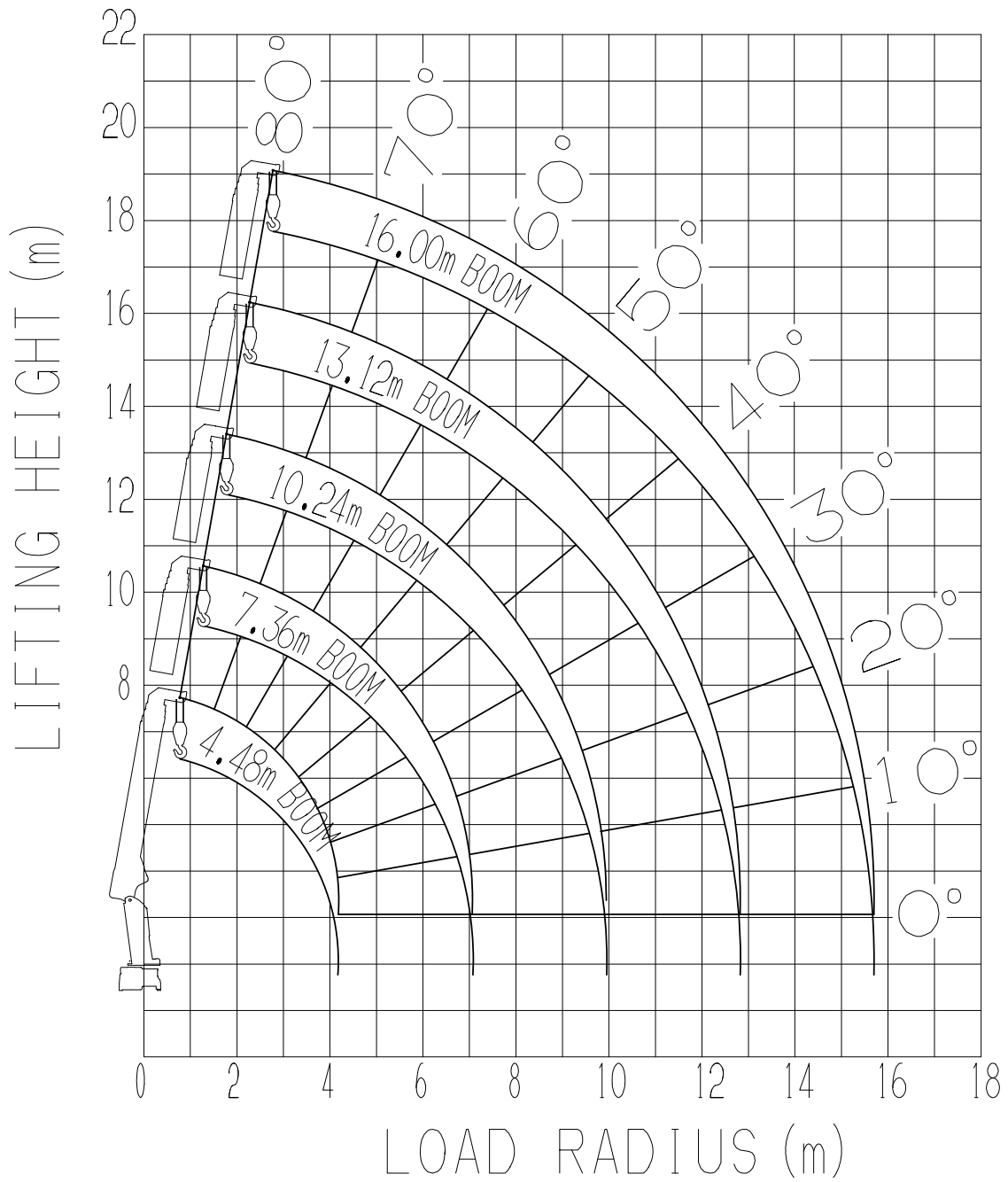
(The following table shows guidelines for bodywork vehicles that can achieve the rated lifting capacities tables A, B and C. Be sure to carry out a stability inspection to determine which performance to apply.)

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)

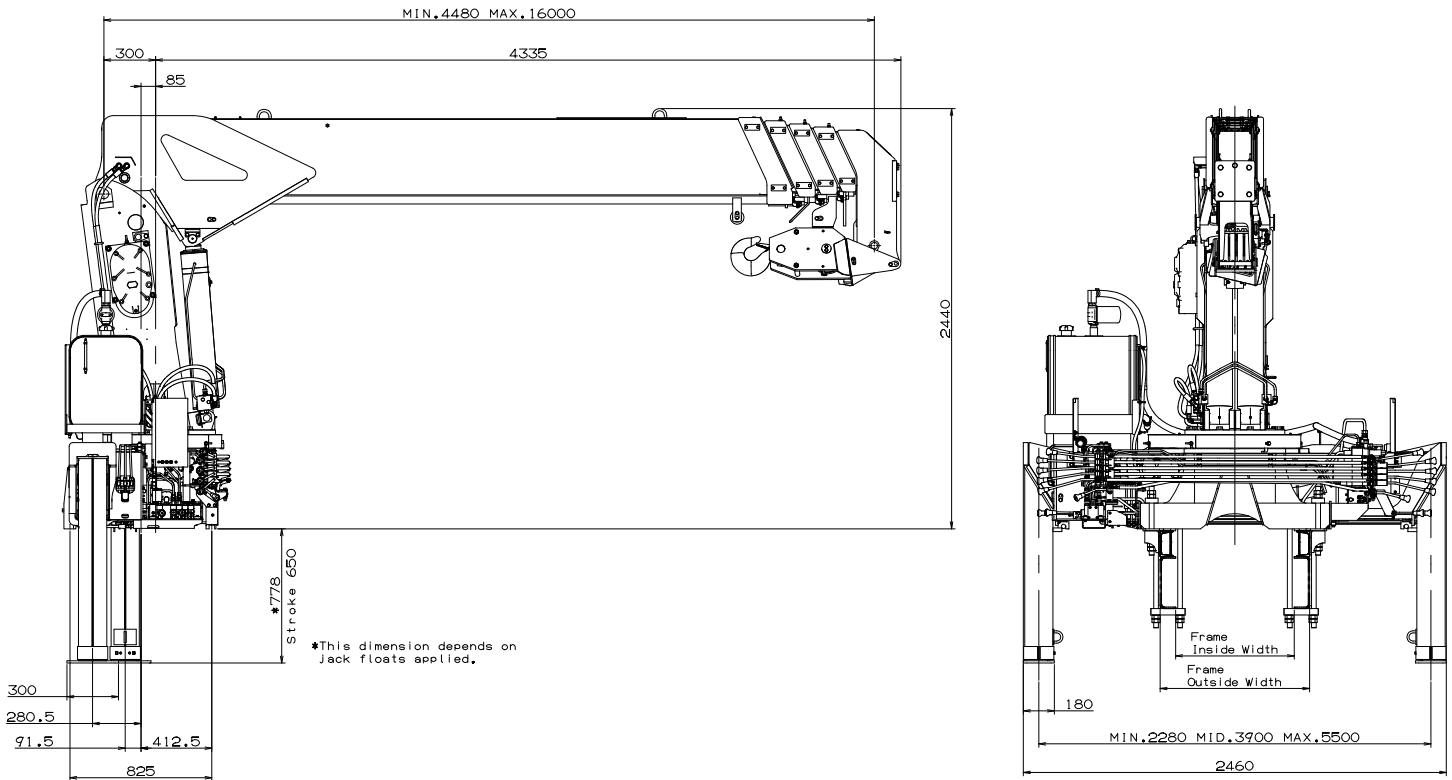


WORKING RANGE (4 part line)



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 weight (including crane mass)	25,000 kg min.
Chassis front axle weight (excluding crane mass)	3,000 kg min.
Wheel base	5,000 mm min. (*1)
P.T.O. torque	180 N·m {18.4 kgf·m} min.
P.T.O. revolution	Approx. 1,200 min ⁻¹ {rpm} max.
Width for crane mounting	Approx. 1,120 mm min.
Frame	Weight distribution and frame strength should be calculated for each truck
Frame width range (inside to outside)	Approx. 505 to 1020 mm
Frame height (ground to frame top)	Approx. 1,300 mm max. (Height of crane mounting base can be changed by combination of jack floats and crane bases)

*1 From the center of the front axle to the center of 2 rear axles .