

TADANO CARGO CRANE

MODEL: **TM-ZX1505HRS**

CRANE SPECIFICATIONS

CRANE CAPACITY

15,000 kg at 2.0 m (10-part line)
8,750 kg at 3.5 m (6-part line)

BOOM

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

Fully retracted length ----- 5.3 m

Fully extended length ----- 18.5 m

Extension speed ----- 13.2 m in 36 s

Elevation ----- Elevated by two double-acting
Hydraulic cylinders

Boom raising speed ----- 0° to 78° in 26 s

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 ----- 62 m/min (at 4th layer)

Wire rope

Diameter x length ----- 10 mm x 107 m

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

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

Hook block ----- 9,000kg capacity, 3sheaves (110kg)

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 ----- 1.5 min⁻¹ {rpm}

Specifications are subject to change without notice.

OUTRIGGERS

Hydraulically operated beams and jacks

Integral with crane frame

Extended width ----- Min. 2,260 mm center to center
 (2,460 mm outer to outer)
 Mid. 4,000 mm center to center
 (4,200 mm outer to outer)
 Max. 5,800 mm center to center
 (6,000 mm outer to outer)

REAR OUTRIGGERS

Hydraulically operated jacks

Width ----- 2,250 mm center to center
 (2,400 mm outer to outer)

HYDRAULIC SYSTEM

Hydraulic pump ----- Tandem gear pump

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

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

Oil tank capacity ----- approx. 130 liters

RADIO CONTROLLER

Model : RCS-F (with colored display)

Control functions of boom telescoping, hoisting up and down,
 boom elevating, slewing, acceleration, speed mode selection,
 working height limiting, Hook-in, Hook-out, horn and emergency stop,
 Basket mode

Frequency ----- 40 frequencies in 433 MHz band

Operating power supply

Transmitter ----- 6V DC, Dry battery R6P(SUM-3) x 4

Control unit ----- 24V DC, Vehicle battery

Transmitter mass ----- Approx. 674 g (includes batteries)

SAFETY DEVICES

AML(Automatic Moment Limiter)

Load indication

Load moment ratio to rated load indication

Warning alarm

Over load limiter (stop) (safety eyes)

Limit warning lamp

Limit warning lamp (three-color)

Outrigger length detector

Outrigger asymmetric extension width control

WHL(Working Height Limiter)

Emergency stop switch on radio controller
 Emergency stop switch
 Anti-two-block device
 Hook safety latch
 Hydraulic safety valves, check valves and holding valves
 Boom angle indicator
 Level gauge

OPTIONAL EQUIPMENT

Hook block - 15,000kg capacity(110kg) and boom point additional sheave
 (Hook block:5 sheaves, swivel type hook with safety latch)
 Maintenance cock
 Oil cooler
 Basket mounting support

CRANE MASS

Approx. 5,200 kg
 (include rear outrigger, hydraulic oil tank and hydraulic oil except mounting parts)

NOTE : Operating speeds of the crane are guaranteed under the condition that the pump delivery is 85 L/ min.

RATED LIFTING CAPACITIES (×1,000 kg)

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

Table A

5.30 m BOOM									
LOAD RADIUS(m)			2.0 and below	2.5	3.0	3.5	4.0	4.5	4.87
CRANE STRENGTH			15.00	12.00	10.00	8.75	7.50	6.60	6.10
EMPTY CHASSIS	Extension width of outriggers	Max.	15.00	12.00	10.00	8.75	7.50	6.60	6.10
		Mid.	15.00	12.00	10.00	7.20	5.40	4.25	3.60
		Min.	8.00	5.00	3.50	2.65	2.05	1.60	1.35

8.60 m BOOM										
LOAD RADIUS (m)			3.0 and below	3.5	4.0	4.5	5.0	6.0	7.0	8.17
CRANE STRENGTH			6.00	6.00	5.50	5.00	4.70	4.30	4.00	3.55
EMPTY CHASSIS	Extension width of outriggers	Max.	6.00	6.00	5.50	5.00	4.70	4.30	3.15	2.25
		Mid.	6.00	6.00	5.25	4.15	3.35	2.35	1.70	1.20
		Min.	3.40	2.50	1.90	1.50	1.20	0.75	0.40	0.15

11.90 m BOOM												
LOAD RADIUS (m)			3.5 and below	4.0	4.5	5.0	6.0	7.0	8.0	9.0	10.0	11.47
CRANE STRENGTH			4.10	4.10	4.10	3.90	3.50	3.20	3.00	2.80	2.60	2.30
EMPTY CHASSIS	Extension width of outriggers	Max.	4.10	4.10	4.10	3.90	3.50	3.15	2.35	1.90	1.55	1.15
		Mid.	4.10	4.10	4.10	3.35	2.35	1.70	1.30	1.00	0.75	0.45
		Min.	2.50	1.90	1.50	1.20	0.75	0.40	0.20	0.15	-	-

15.20 m BOOM															
LOAD RADIUS(m)			4.0 and below	4.5	5.0	6.0	7.0	8.0	9.0	10.0	11.0	12.0	13.0	14.0	14.77
CRANE STRENGTH			4.00	3.80	3.60	3.30	3.00	2.80	2.60	2.40	2.20	2.00	1.85	1.75	1.65
EMPTY CHASSIS	Extension width of outriggers	Max.	4.00	3.80	3.60	3.30	3.00	2.35	1.90	1.55	1.30	1.10	0.95	0.80	0.70
		Mid.	4.00	3.80	3.35	2.35	1.70	1.30	1.00	0.75	0.55	0.45	0.35	0.25	0.22

18.50 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	16.0	17.0	18.07
CRANE STRENGTH			3.45	3.20	2.90	2.70	2.50	2.30	2.10	1.90	1.70	1.55	1.45	1.35	1.25	1.20
EMPTY CHASSIS	Extension width of outriggers	Max.	3.45	3.20	2.90	2.35	1.90	1.55	1.30	1.10	0.95	0.80	0.70	0.60	0.50	0.45
		Mid.	3.35	2.35	1.70	1.30	1.00	0.75	0.55	0.45	0.35	0.25	0.22	0.20	0.18	0.15

Table B

5.30 m BOOM									
LOAD RADIUS (m)			2.0 and below	2.5	3.0	3.5	4.0	4.5	4.87
CRANE STRENGTH			15.00	12.00	10.00	8.75	7.50	6.60	6.10
EMPTY CHASSIS	Extension width of outriggers	Max.	15.00	12.00	10.00	8.75	7.50	6.60	6.10
		Mid.	15.00	12.00	10.00	8.55	6.45	5.10	4.35
		Min.	9.45	5.95	4.20	3.15	2.45	1.95	1.65

8.60 m BOOM										
LOAD RADIUS (m)			3.0 and below	3.5	4.0	4.5	5.0	6.0	7.0	8.17
CRANE STRENGTH			6.00	6.00	5.50	5.00	4.70	4.30	4.00	3.55
EMPTY CHASSIS	Extension width of outriggers	Max.	6.00	6.00	5.50	5.00	4.70	4.30	3.85	2.85
		Mid.	6.00	6.00	5.50	5.00	4.10	2.90	2.15	1.50
		Min.	4.10	3.05	2.40	1.90	1.50	1.00	0.65	0.35

11.90 m BOOM												
LOAD RADIUS (m)			3.5 and below	4.0	4.5	5.0	6.0	7.0	8.0	9.0	10.0	11.47
CRANE STRENGTH			4.10	4.10	4.10	3.90	3.50	3.20	3.00	2.80	2.60	2.30
EMPTY CHASSIS	Extension width of outriggers	Max.	4.10	4.10	4.10	3.90	3.50	3.20	2.90	2.45	2.00	1.50
		Mid.	4.10	4.10	4.10	3.90	2.90	2.15	1.55	1.25	1.00	0.75
		Min.	3.05	2.40	1.90	1.50	1.00	0.65	0.35	0.25	0.15	-

15.20 m BOOM															
LOAD RADIUS(m)			4.0 and below	4.5	5.0	6.0	7.0	8.0	9.0	10.0	11.0	12.0	13.0	14.0	14.77
CRANE STRENGTH			4.00	3.80	3.60	3.30	3.00	2.80	2.60	2.40	2.20	2.00	1.85	1.75	1.65
EMPTY CHASSIS	Extension width of outriggers	Max.	4.00	3.80	3.60	3.30	3.00	2.80	2.45	2.00	1.65	1.30	1.15	1.05	1.00
		Mid.	4.00	3.80	3.60	2.90	2.15	1.55	1.25	1.00	0.80	0.65	0.55	0.45	0.43

18.50 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	16.0	17.0	18.07
CRANE STRENGTH			3.45	3.20	2.90	2.70	2.50	2.30	2.10	1.90	1.70	1.55	1.45	1.35	1.25	1.20
EMPTY CHASSIS	Extension width of outriggers	Max.	3.45	3.20	2.90	2.70	2.45	2.00	1.65	1.30	1.15	1.05	0.95	0.85	0.75	0.70
		Mid.	3.45	2.90	2.15	1.55	1.25	1.00	0.80	0.65	0.55	0.45	0.40	0.35	0.30	0.25

Table C

5.30 m BOOM									
LOAD RADIUS (m)			2.0 and below	2.5	3.0	3.5	4.0	4.5	4.87
CRANE STRENGTH			15.00	12.00	10.00	8.75	7.50	6.60	6.10
EMPTY CHASSIS	Extension width of outriggers	Max.	15.00	12.00	10.00	8.75	7.50	6.60	6.10
		Mid.	15.00	12.00	10.00	8.75	7.25	5.75	4.95
		Min.	10.60	6.75	4.80	3.65	2.90	2.30	1.95

8.60 m BOOM										
LOAD RADIUS (m)			3.0 and below	3.5	4.0	4.5	5.0	6.0	7.0	8.17
CRANE STRENGTH			6.00	6.00	5.50	5.00	4.70	4.30	4.00	3.55
EMPTY CHASSIS	Extension width of outriggers	Max.	6.00	6.00	5.50	5.00	4.70	4.30	4.00	3.25
		Mid.	6.00	6.00	5.50	5.00	4.70	3.35	2.50	1.85
		Min.	4.70	3.55	2.80	2.25	1.85	1.25	0.85	0.55

11.90 m BOOM												
LOAD RADIUS (m)			3.5 and below	4.0	4.5	5.0	6.0	7.0	8.0	9.0	10.0	11.47
CRANE STRENGTH			4.10	4.10	4.10	3.90	3.50	3.20	3.00	2.80	2.60	2.30
EMPTY CHASSIS	Extension width of outriggers	Max.	4.10	4.10	4.10	3.90	3.50	3.20	3.00	2.80	2.35	1.80
		Mid.	4.10	4.10	4.10	3.90	3.35	2.50	1.90	1.60	1.30	0.95
		Min.	3.55	2.80	2.25	1.85	1.25	0.85	0.55	0.40	0.30	-

15.20 m BOOM															
LOAD RADIUS(m)			4.0 and below	4.5	5.0	6.0	7.0	8.0	9.0	10.0	11.0	12.0	13.0	14.0	14.77
CRANE STRENGTH			4.00	3.80	3.60	3.30	3.00	2.80	2.60	2.40	2.20	2.00	1.85	1.75	1.65
EMPTY CHASSIS	Extension width of outriggers	Max.	4.00	3.80	3.60	3.30	3.00	2.80	2.60	2.35	1.90	1.65	1.45	1.30	1.20
		Mid.	4.00	3.80	3.60	3.30	2.50	1.90	1.60	1.30	1.00	0.85	0.75	0.65	0.60

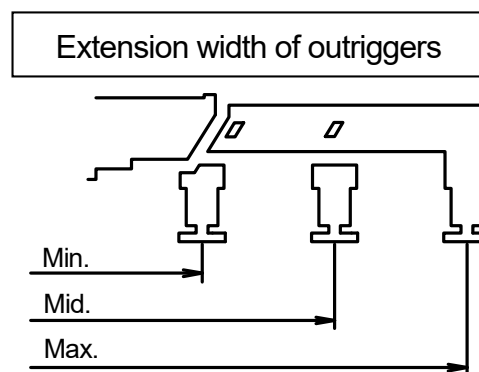
18.50 m BOOM																
LOAD RADIUS (m)			5.0 and below	6.0	7.0	8.0	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0	18.07
CRANE STRENGTH			3.45	3.20	2.90	2.70	2.50	2.30	2.10	1.90	1.70	1.55	1.45	1.35	1.25	1.20
EMPTY CHASSIS	Extension width of outriggers	Max.	3.45	3.20	2.90	2.70	2.50	2.30	1.90	1.65	1.45	1.30	1.15	1.10	1.00	0.90
		Mid.	3.45	3.20	2.50	1.90	1.60	1.30	1.00	0.85	0.75	0.65	0.55	0.50	0.45	0.40

- NOTES :
1. When the working state approaches the stability limit or the strength limit, warns with the limit warning lamp and the buzzer. When the working state reaches the limit, the buzzer continues to sound.
 2. When the operation exceeding the rated lifting capacity is performed, the operation stops automatically.
 3. Set up the outriggers and make the front wheels in slight contact with the ground.
(If the tire deformation is large, AML may operate early.)
 4. This value have been calculated on the basis of ISO 15442.
 5. This value includes the mass of lifting devices such as hook block (110 kg).
 6. This load radius shows actual load radius which includes boom deflection.
 7. 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.
 8. If the boom length exceeds the table value even a little, the performance is limited to the performance of the next boom length.
 9. If an operation that exceeds 6,000 kg is performed, change the number of parts of line. If an operation that exceeds 9,000 kg is performed, change the hook block also to the optional 15,000 kg hook block. For details, refer to the operation manual.
 10. Empty Chassis Rated Capacities table A, B, and C depend on the types of chassis.
 11. 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.

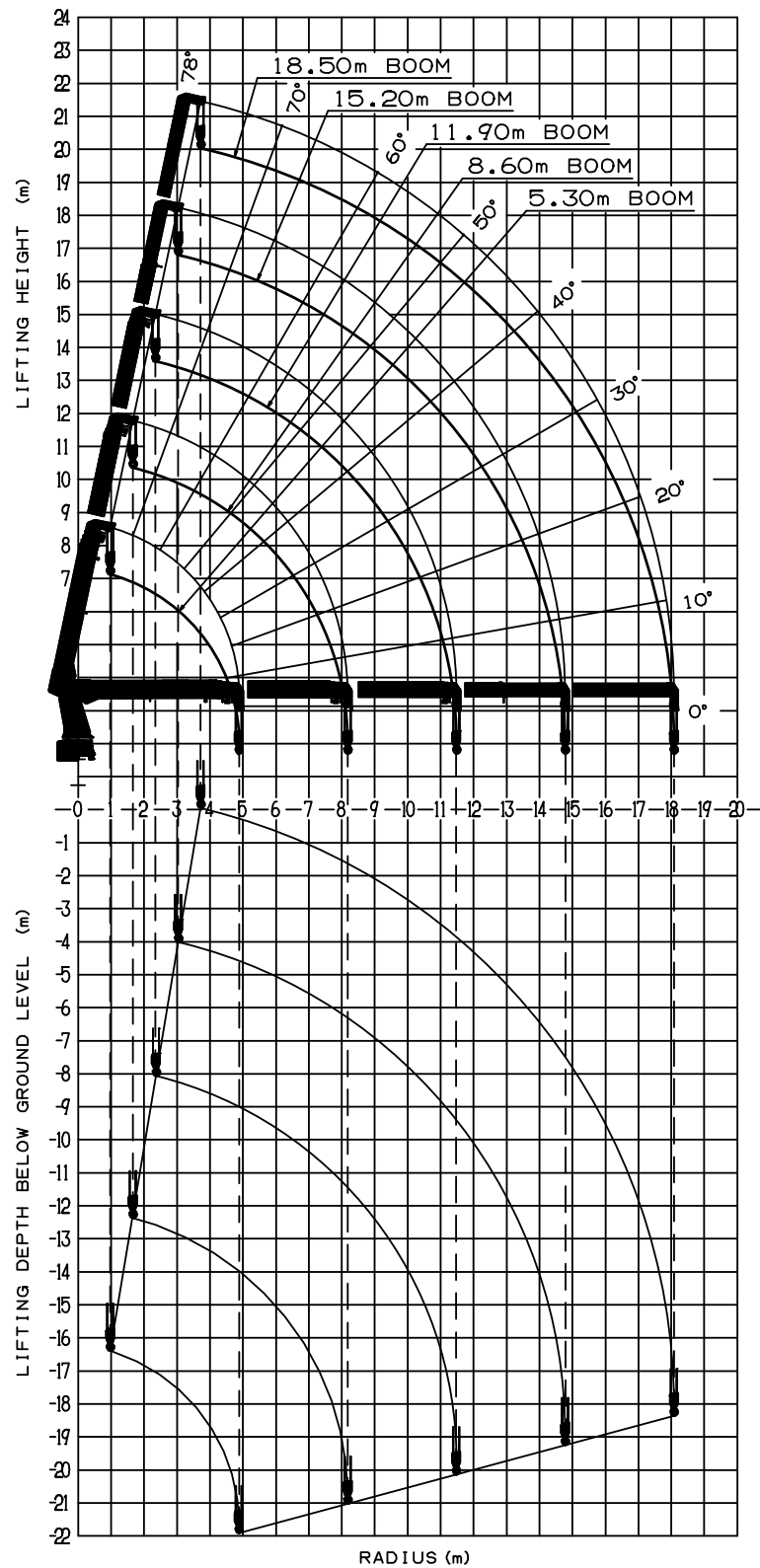
(The following table shows guidelines for bodywork vehicles that can achieve the rated lifting capacities tables A, B, and C. Be sure to carry out a stability inspection to determine which performance to apply.)

A	WB : 5000over, GVW : 25t over, FVW : 3.0t over
B	WB : 5000over, GVW : 30t over, FVW : 4.0t over
C	WB : 5000over, GVW : 30t over, FVW : 5.0t over

Number of part line	4	6	10
Maximum of load	6,000 kg	9,000 kg	15,000 kg



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.

WORKING RANGE (BASKET MODE)

Table A

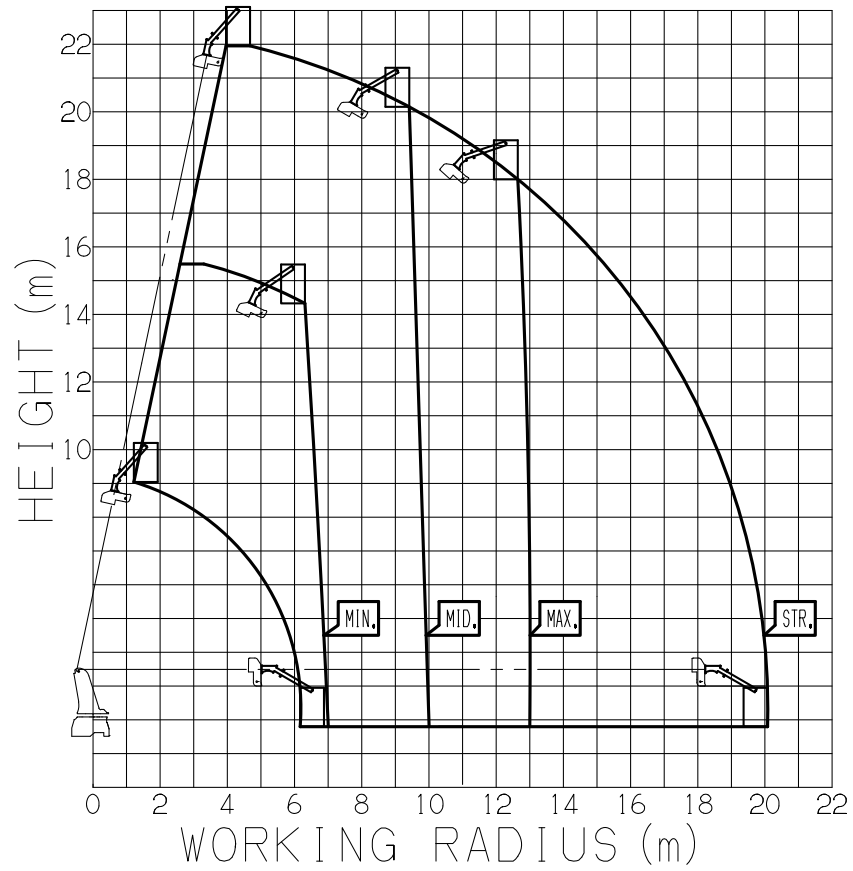


Table B

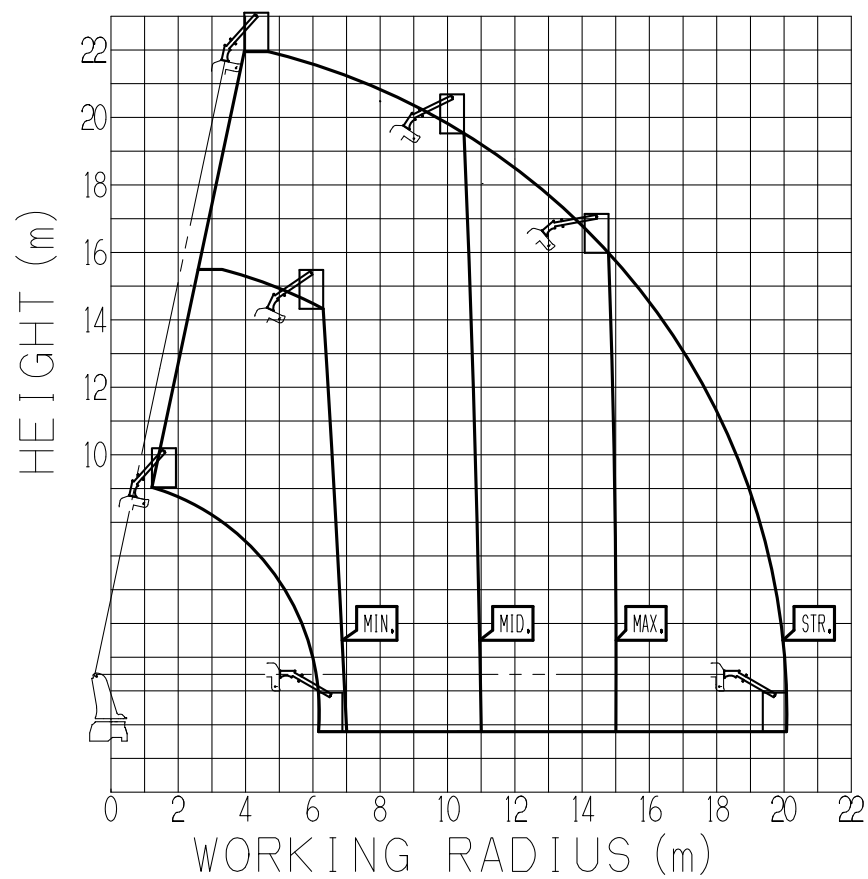
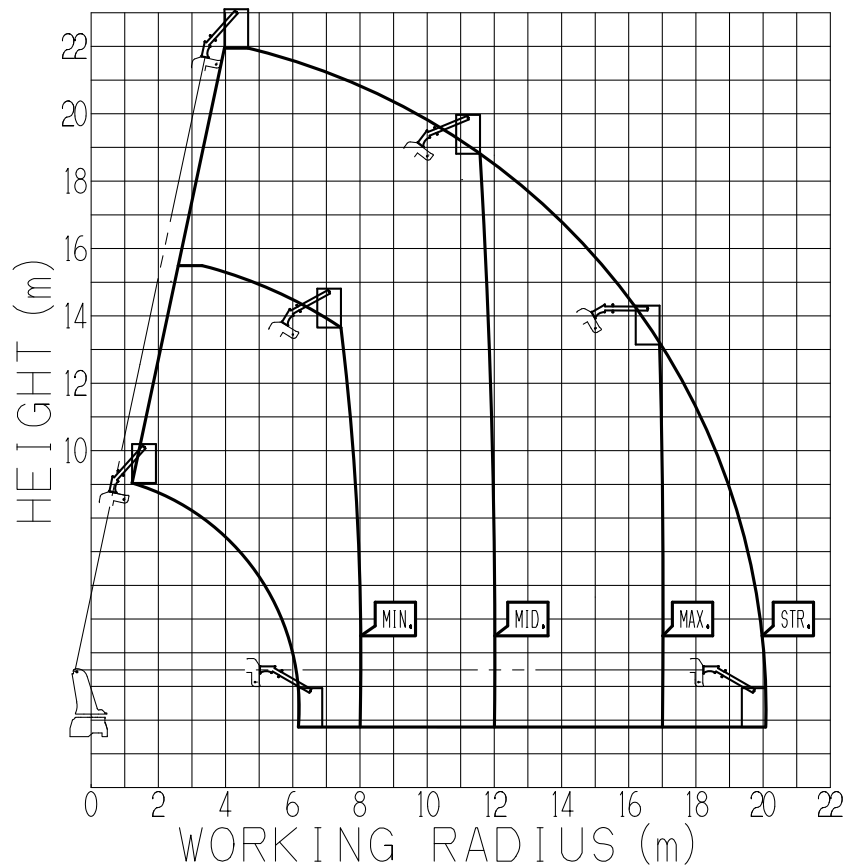
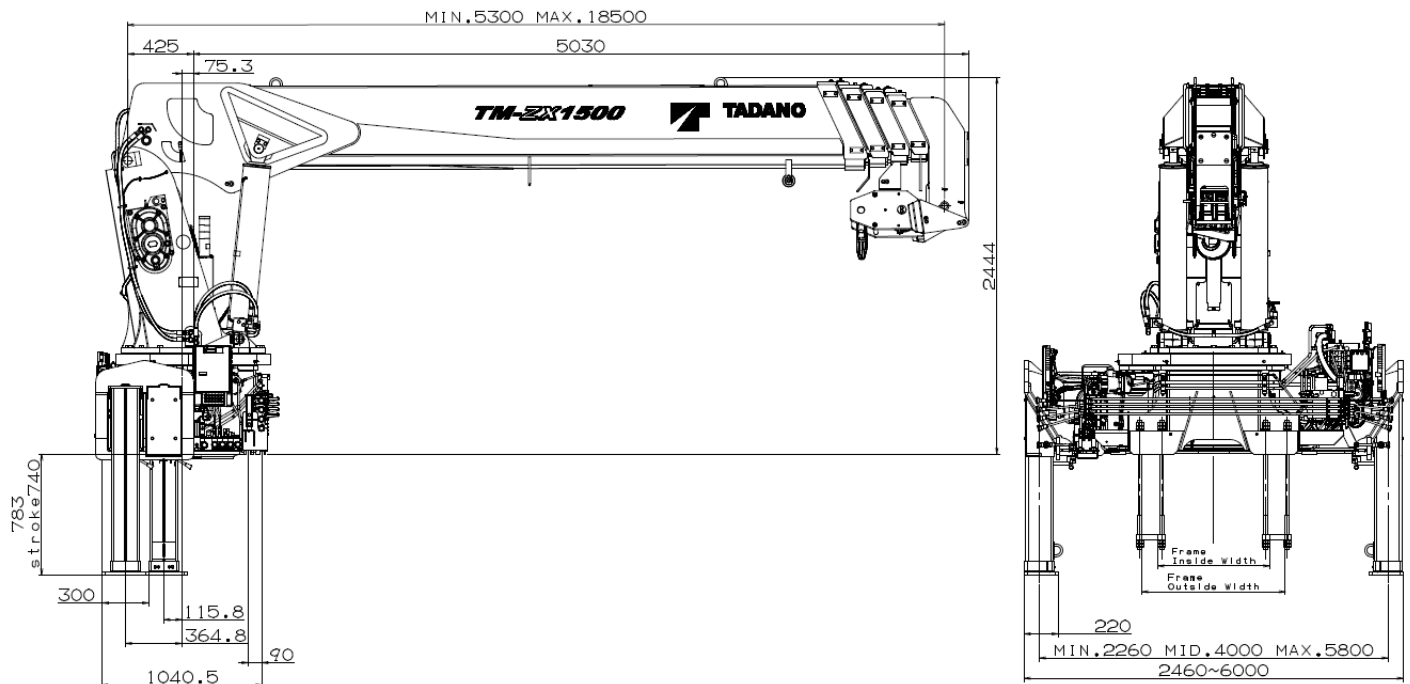


Table C

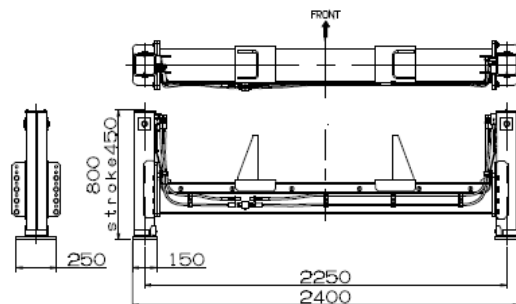


- NOTE : 1.The indicated working range assumes that the machine is set up on a firm and level ground, and does not include boom deflection.
- 2.This working range chart shows the over-side and over-rear areas.
(The working range is up to "STR." when the stability is maximum. When the stability is minimum, the working range is in accordance with the outrigger extension width during work.)
- 3.The working range in the over-front area is smaller than the indication in the working range chart.
- 4."MAX.", "MID.", and "MIN." indicates the outrigger extension widths.
- 5.This working range chart is an example, and the actual work range varies depending on the shape of the basket.

DIMENSIONS



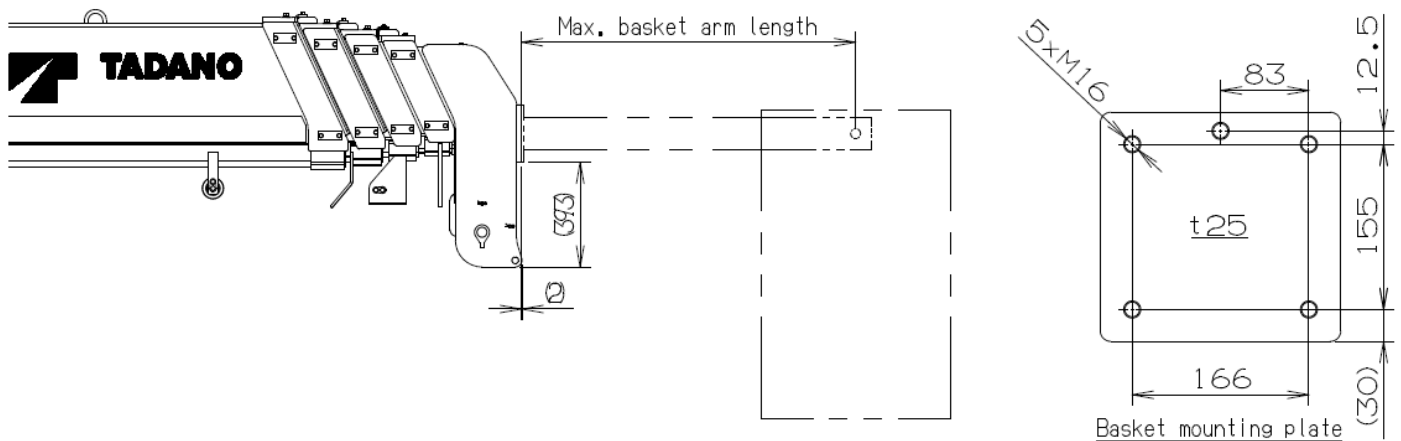
REAR OUTRIGGER



MOUNTABLE BASKET SPECIFICATIONS

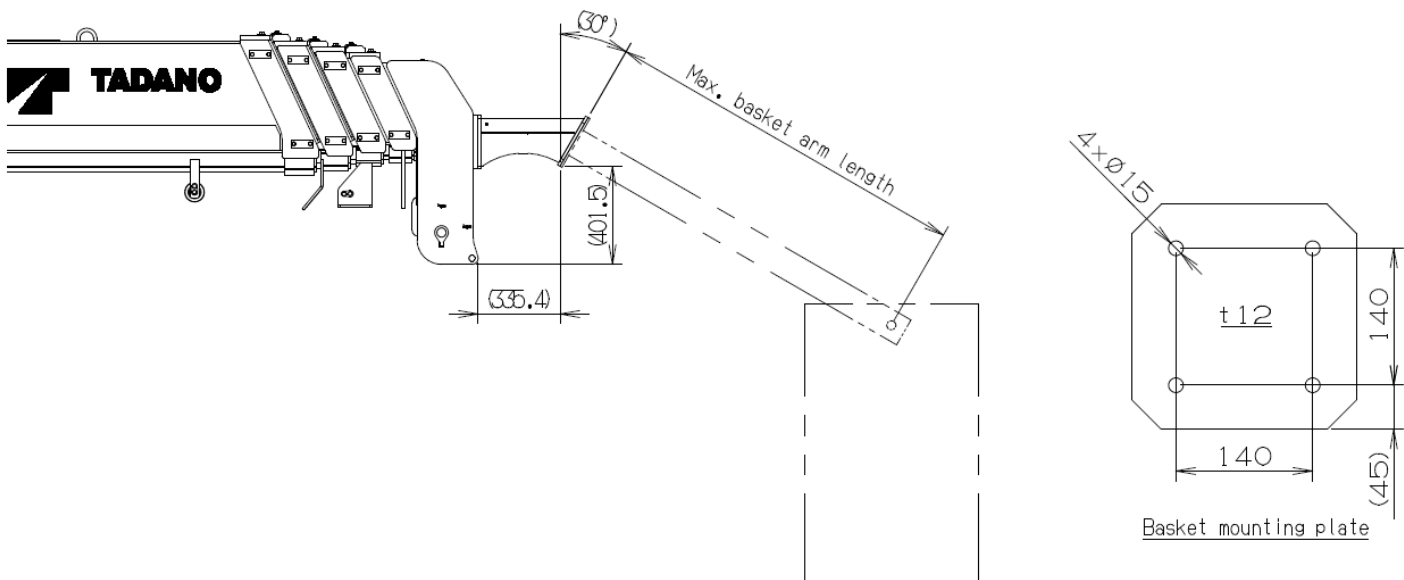
Max. basket weight	200 kg
Max. basket loading capacity	200 kg
Max. basket arm length	1700 mm

- The size of mounting bolt is M16x2.0, and the length should be selected so that the engagement allowance is 13mm or more and 24mm less.
- Use bolts with a strength classification of 10.9 or equivalent and washers suitable for the bolts.
- Tightening torque : 147 ± 8 [N · m]



MOUNTABLE BASKET SPECIFICATIONS (WHEN USING OPTIONAL BASKET MOUNTING SUPPORT)

Max. basket weight	200 kg
Max. basket loading capacity	200 kg
Max. basket arm length	1500 mm



GENERAL DATA FOR SUITABLE TRUCKS

Gross vehicle weight (including crane mass)	25,000 kg min.
Front vehicle weight (excluding crane mass)	3,000 kg min.
Wheel base	5,000 mm min. (*1)
Section modulus	2,555 cm ³ min. (*2)
P.T.O. torque	255 N·m {26 kgf·m} min.
P.T.O. revolution	Approx. 1,200 min ⁻¹ {rpm} max.
Width for crane mounting	Approx. 1,350 mm min.
Frame	Weight distribution and frame strength should be calculated for each truck
Frame width range (inside to outside)	Approx. 520 to 1,010 mm
Frame height (ground to frame top)	Approx. 1,400 mm max. (Height of crane mounting base can be changed by crane bases)

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

※2 Section modulus of chassis frame/sub-frame combination (total of both sides) .

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

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

