

TADANO CARGO CRANE

MODEL : **TM-ZR865RS**

CRANE SPECIFICATIONS

<u>CRANE CAPACITY</u>	8,200 kg at 1.8 m (6-part lines)
<u>BOOM</u>	5-sectioned, fully powered partly synchronized telescoping boom of pentagonal box construction. Retracted length ----- 4.4 m Extended length ----- 15.92 m Extending speed ----- 11.52 m / 40 s Elevation ----- Elevated by a double-acting hydraulic cylinder Elevating speed ----- 1° to 82° / 18 s Boom point ----- 3 sheaves
<u>WINCH</u>	Hydraulic motor driven. Spur gear speed reduction, provided with automatic brake and cable follower. Single line pull ----- 14.7 kN {1,500 kgf} Single line speed ----- 45 m/min (at 4th layer) Wire rope diameter × length --- 10 mm × 95 m breaking strength ----- 73.5 kN {7.5 tf} construction ----- 7 × 7 + 6 × Fi(29) Hook block ----- 3 sheaves
<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 ⁻¹ {rpm}

Specifications are subject to change without notice.

OUTRIGGERS

Hydraulically extended sliders and hydraulically extended jacks.
Integral with crane frame. Power up and down.
Extended width ----- Min. 2,250 mm
Mid. 3,500 mm
Full 4,800 mm

HYDRAULICS

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. 90 L

RADIO CONTROLLER

Model : RCS-F
Control functions of boom telescoping, hoisting up and down,
boom elevating, swing, acceleration, speed mode selection,
working height limiting, horn and emergency stop.
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. 576 g (includes batteries)

SAFETY DEVICES

AML(Automatic Moment Limiter)
Load indication
Warning alarm
Over load limiter
WHL(Working Height Limiter)
Load meter
Radius indicator
Emergency stop switch on radio controller
Terminal for emergency stop switch
Over-winding alarm
Hoisting limiter
Jack interlock
P.T.O indicator lamp
Hook safety latch
Hydraulic safety valves, check valves and holding valves
Level gauge

CRANE MASS

Approx. 3,200 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 IN KILOGRAMS


Empty chassis Rated Capacities

C \ A B	4.4m			7.28m			10.16m		
	Full	Mid.	Min.	Full	Mid.	Min.	Full	Mid.	Min.
1.8 m and below	8,200	6,000	4,000	6,000	6,000	4,000			
2.4 m	6,000	6,000	4,000	6,000	6,000	4,000	3,000	3,000	2,900
2.9 m	5,000	5,000	3,000	5,000	5,000	2,900	3,000	3,000	2,900
3.5 m	4,200	4,200	2,300	4,200	4,200	2,150	3,000	3,000	2,150
4.0 m				3,700	3,350	1,750	3,000	3,000	1,750
4.15m	3,550	3,250	1,650						
4.5 m				3,300	2,700	1,350	3,000	2,700	1,350
4.6 m				3,200	2,600	1,300	3,000	2,600	1,300
5.0 m				2,900	2,200	1,100	2,700	2,200	1,100
6.0 m				2,200	1,600	750	2,200	1,600	750
7.0 m							1,800	1,250	500
7.03m				1,750	1,150	500			
8.0 m							1,400	950	350
9.0 m							1,150	750	200
9.91m							1,000	600	130

C \ A B	13.04m		15.92m	
	Full	Mid.	Full	Mid.
2.9 m and below	3,000	3,000		
3.5 m	3,000	3,000	2,600	2,600
4.0 m	3,000	3,000	2,600	2,600
4.5 m	3,000	2,700	2,600	2,600
4.6 m	2,900	2,600	2,600	2,600
5.0 m	2,600	2,200	2,600	2,200
6.0 m	2,000	1,600	2,000	1,600
7.0 m	1,700	1,250	1,650	1,250
8.0 m	1,400	950	1,400	950
9.0 m	1,150	750	1,150	750
10.0 m	1,000	600	1,000	600
11.0 m	900	500	900	500
12.0 m	750	450	750	450
12.7 m	650	400		
13.0 m			650	400
14.0 m			550	350
15.67m			450	250

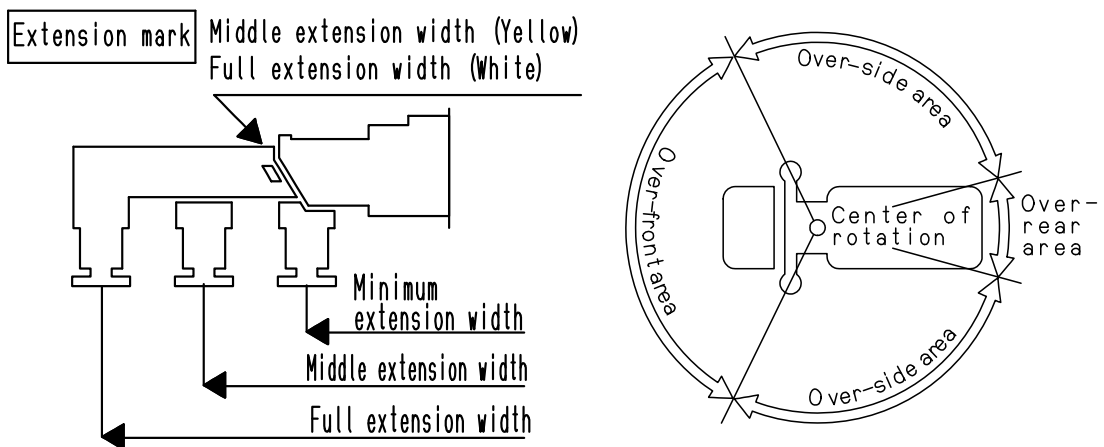
A : Boom Length
 B : Outrigger extension width
 C : Load radius

NOTES :

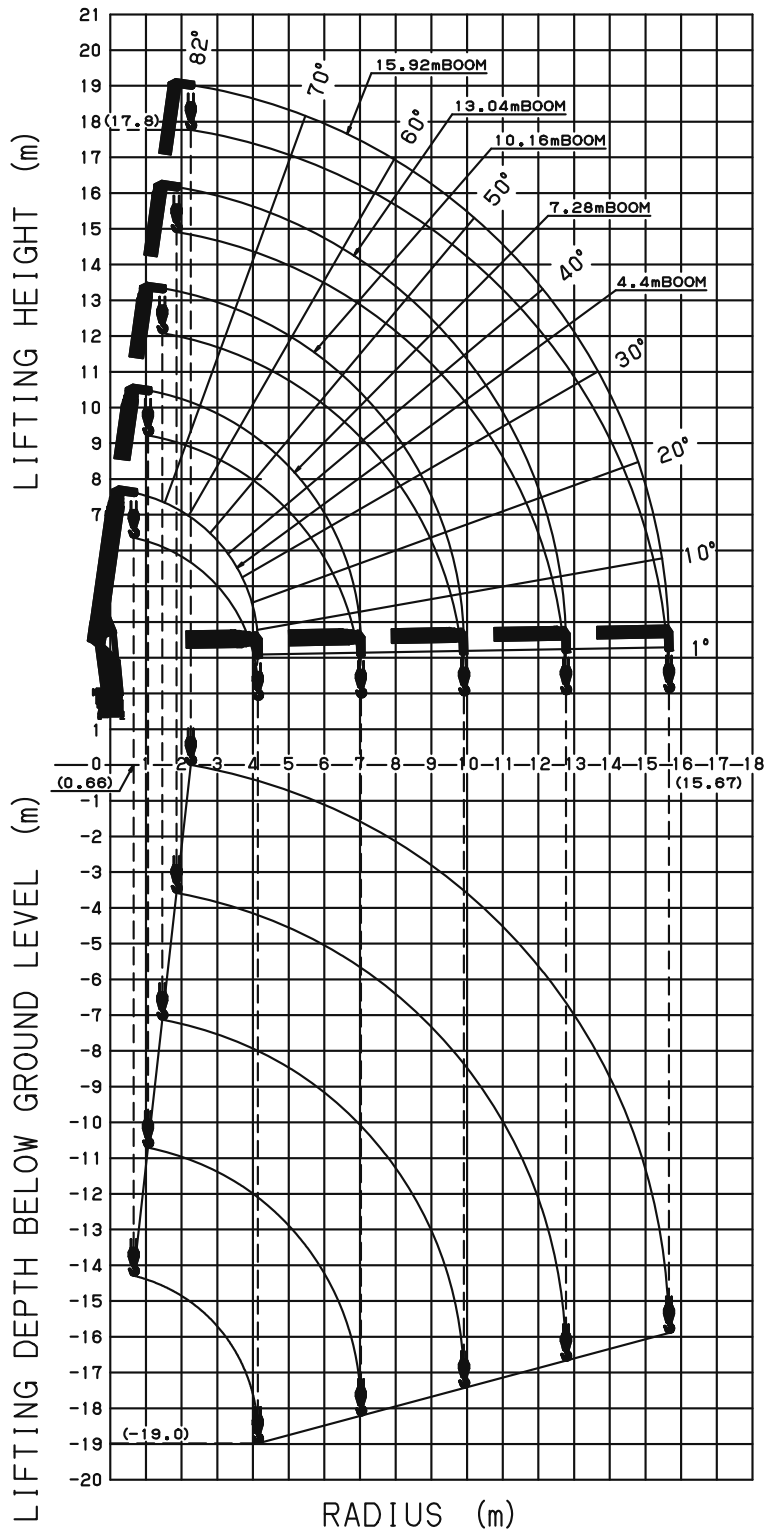
1. Empty Chassis Rated Capacities in these tables depend on condition that crane is set level on firm level ground. Those above bold lines are based on crane strength and those below, on crane stability.
2. The mass of hook block (90kg), slings and all similarly used load handling devices must be added to the mass of load.
3. For boom lengths not shown, use the rated lifting capacity of next longer boom.
4. When the boom length is 13.04m, a half section of the  mark on lateral face of the 4th boom section is exposed out of the 3rd boom section.
5. Standard number of part lines for Max lifting load is as shown below.

Max. lifting load	8,200kg	6,000kg or less
No. of part lines	6	4

6. For boom length longer than 10.16m, extend outriggers to full or middle extension width.
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.
8. Outrigger extension width means the outrigger beam position under the boom which may be the minimum or extended to the middle or the full extension irrespective of the opposite outrigger beam position and the both sides of jacks are properly extended.



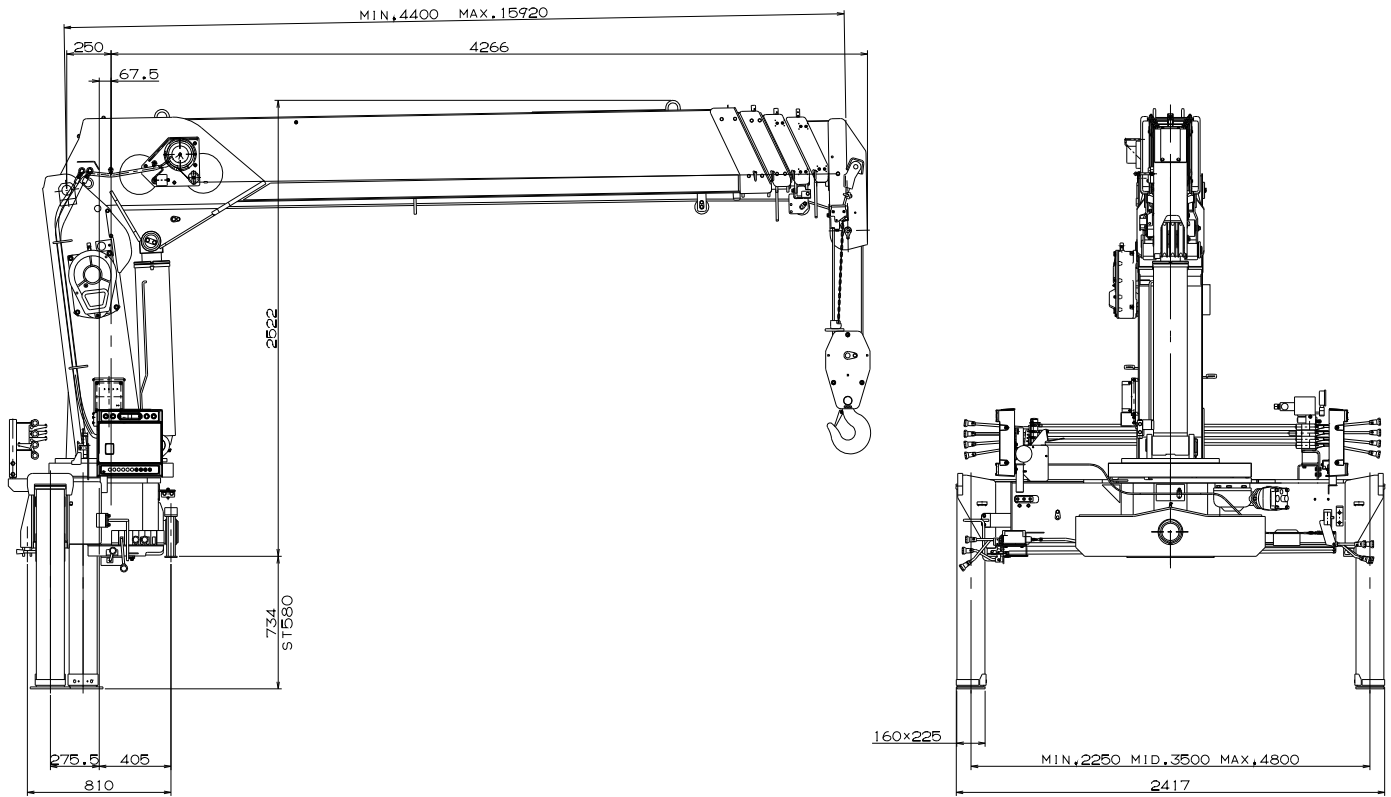
WORKING RANGE



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) ----- 20,000 to 25,000kg
- P.T.O. torque ----- 205N·m {20.9kgf·m} min.
- P.T.O. revolution ----- Approx. 350 to 1,700min⁻¹ {rpm}
- Width for crane mounting ----- Approx. 1,115 mm min.
- Frame ----- Weight distribution and frame strength should be calculated for each truck
- Frame width range (inside to outside) ----- Approx. 576 to 953mm
- Frame height (ground to frame top) ----- Approx. 1,055mm max.

Height of crane mounting base can be changed by combination of jack floats and crane bases

TADANO CARGO CRANE

MODEL: TM-ZT1005H

CRANE SPECIFICATIONS

MAXIMUM LIFTING CAPACITY 10,000 kg at 1.4 m (8-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 / 41 s

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

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

Boom point -----4 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 ----- 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 ----- 2.2 min⁻¹ {rpm}

OUTRIGGERS

Hydraulically extended sliders and hydraulically extended jacks
 Integral with crane frame Power up and down
 Extended width ----- Min. 2,300 mm
 Mid. 3,900 mm
 Max.5,200 mm

HYDRAULICS

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. 90 L

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

CRANE MASS

Approx. 3,085 kg (except mounting parts)

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

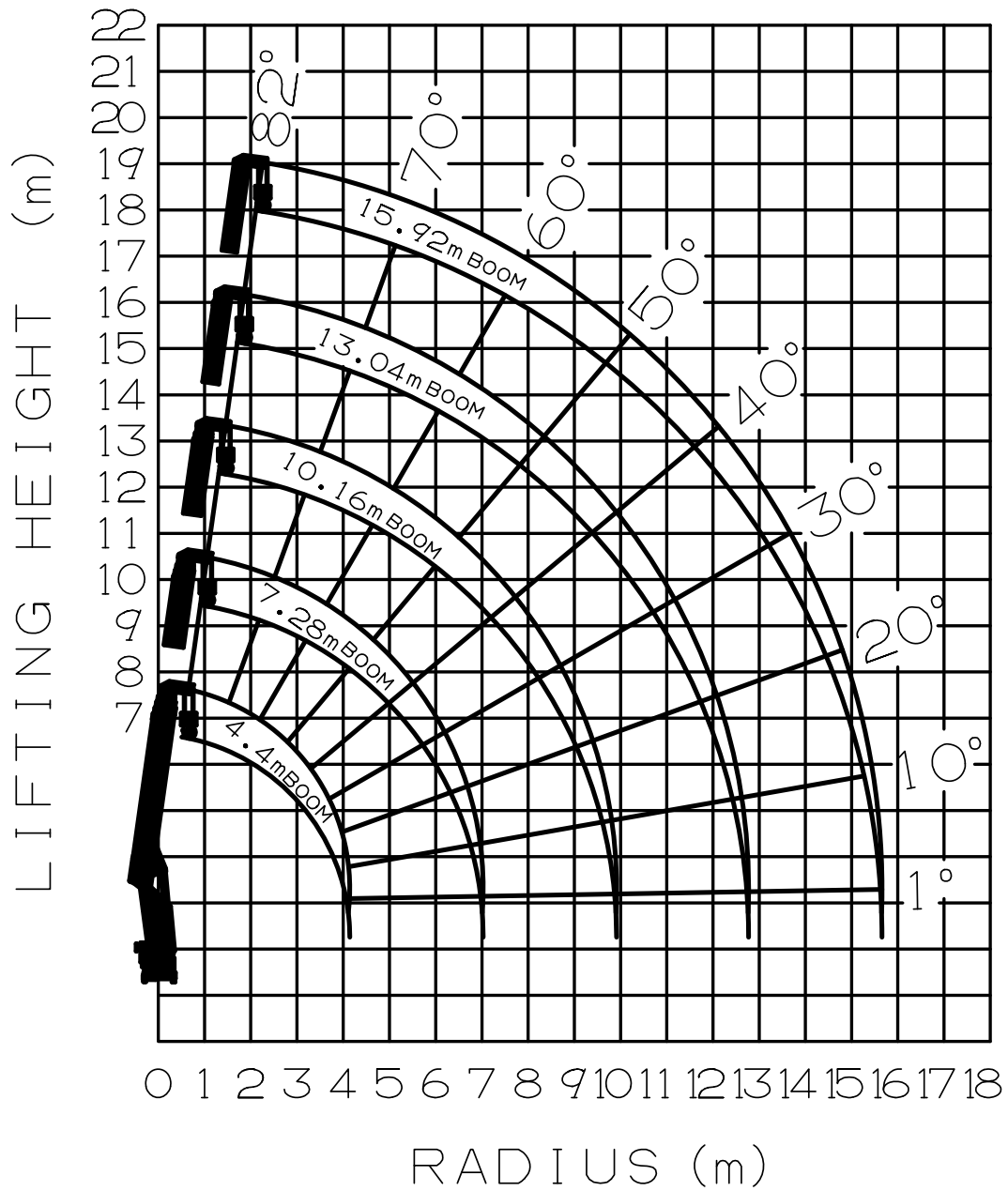
RATED LIFTING CAPACITIES IN KILOGRAMS

Crane Strength Rated Capacities

Load Radius	4.4 m Boom	Load Radius	7.28 m Boom	Load Radius	10.16 m Boom	Load Radius	13.04 m Boom	Load Radius	15.92 m Boom
1.4 m and below	10,000	2.25 m and below	6,000	4.5 m and below	3,000	4.5 m and below	3,000	5.0 m and below	2,600
1.85 m	8,000	3.1 m	4,900	5.0 m	2,700	5.0 m	2,600	6.0 m	2,000
2.25 m	6,000	3.5 m	4,200	6.0 m	2,200	6.0 m	2,000	7.0 m	1,650
3.1 m	4,900	4.0 m	3,700	7.0 m	1,800	7.0 m	1,700	8.0 m	1,400
3.5 m	4,200	4.5 m	3,300	8.0 m	1,400	8.0 m	1,400	9.0 m	1,150
4.15 m	3,550	5.0 m	2,900	9.0 m	1,150	9.0 m	1,150	10.0 m	1,000
		6.0 m	2,200	9.91 m	1,000	10.0 m	1,000	11.0 m	900
		7.03 m	1,750			11.0 m	900	12.0 m	750
						12.0 m	750	13.0 m	650
						12.7 m	650	14.0 m	550
								15.67 m	450

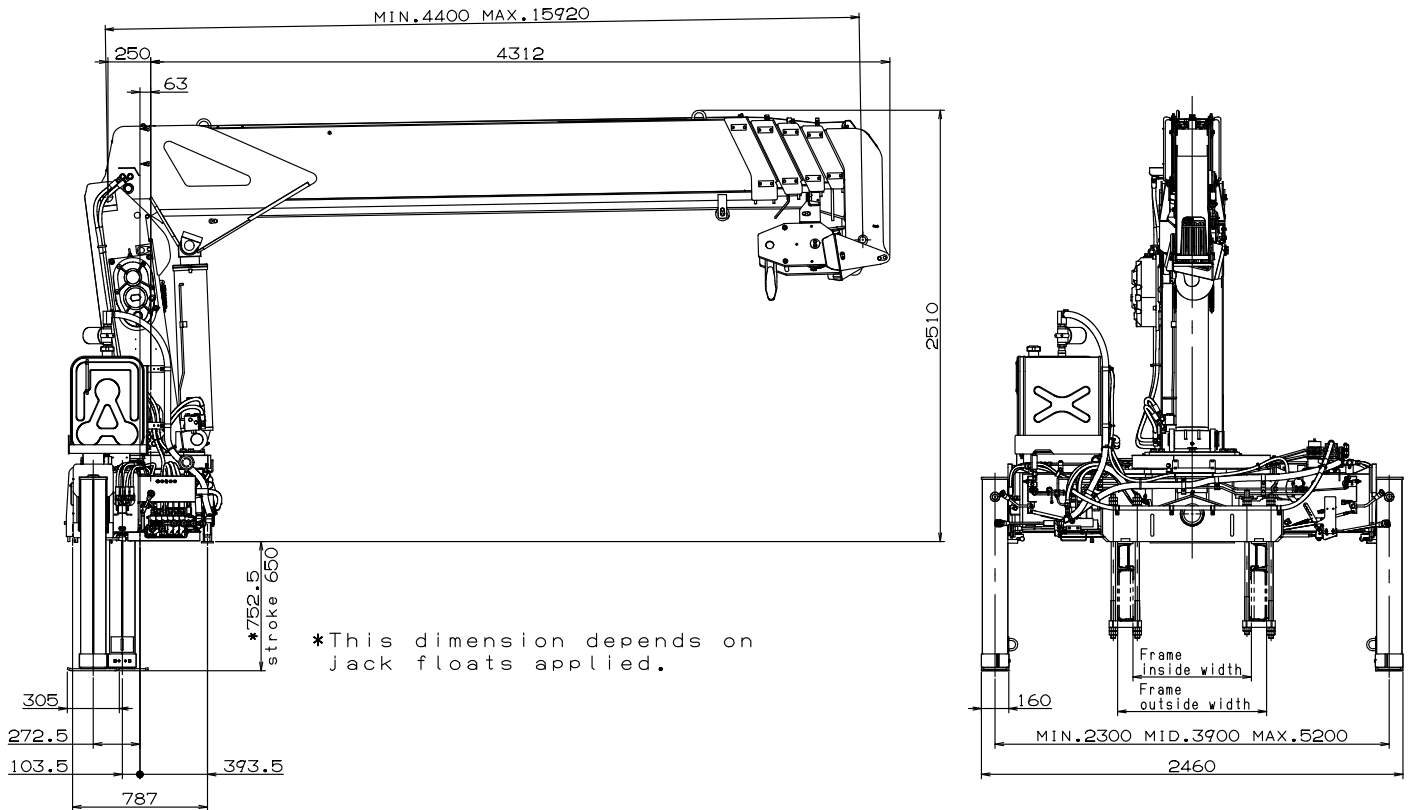
- NOTES :
1. The above numerical values of total rated loads are based on crane strength only. The total rated loads based on stability may lower than those in the above table depending on the loading conditions and the types of the chassis.
 2. Rated Lifting Capacities in these tables depend on condition that crane is set level on firm level ground.
 3. The mass of the hook (90 kg), slings and all similarly used load lifting devices must be added to the mass of the load.
 4. For boom lengths not shown, use the rated lifting capacity of next longer boom.
 5. 13.04m boom means \sphericalangle mark on 4th boom section side plate is half seen.
 6. When the lifting load is heavier than 6,000kg, number of part lines must be 8. In case of 6,000kg or less, number of part lines must be 4. Load per line must not surpass 14.7kN{1,500kgf}.

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.

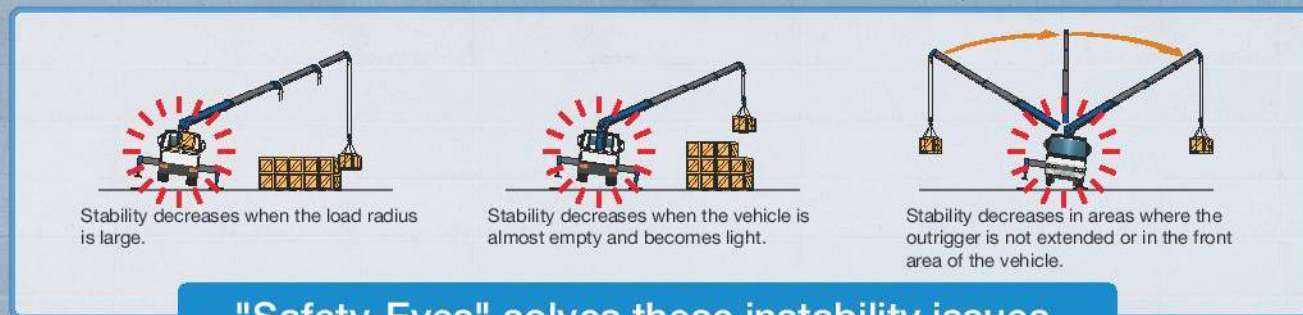
DIMENSIONS



GENERAL DATA FOR SUITABLE TRUCKS

- Gross vehicle mass (including crane mass) --- 25,000 kg or more
- 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. 1,000 mm min.
- Frame ----- Weight distribution and frame strength
should be calculated for each truck
- Frame width range (inside to outside) ----- Approx. 610 to 940 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)

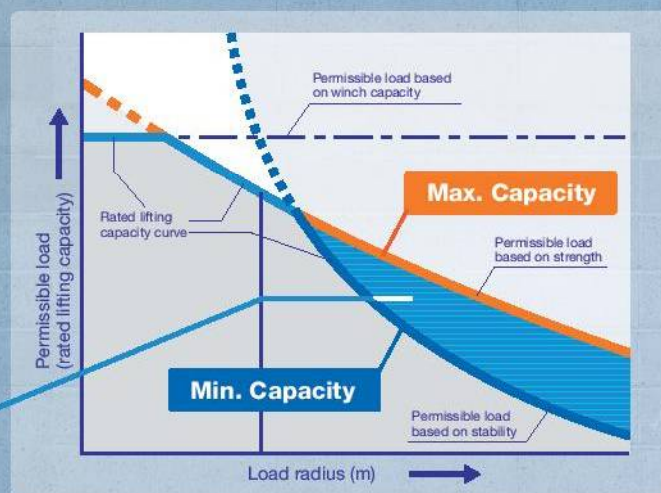
"SAFETY-EYES" SYSTEM



"Safety-Eyes" solves these instability issues

This is a completely new system that monitors a series of operations regarding both stability and strength from when the vehicle is fully loaded until it is empty. This system enables work to be performed safely while taking full advantage of the crane's capabilities and significantly broadens the scope of work. The "Safety-Eyes" consists of an "Automatic Moment Limiter", "boom jack interlock system", and a "working height limiter", and monitors work safety.

According to payload (stability), the "Safety-Eyes" system calculates automatically and limits crane operation in order to prevent falling over of the crane.



OPTIONS

15 TON HOOK BLOCK

With additional 2 sheaves for 10 parts of line
(Hook block weight: 110 kg)

Note: The standard specification is a 9 ton hook block.



HYDRAULIC OIL COOLER

Cools down hydraulic oil temperature for safe operation of hydraulic components and their longer service life.
Saves costs of maintenance, repair, and part replacement.



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Continuing technical development requires Tadano to retain the right to make specifications, equipment and price changes without notice. Some specifications are subject to change.

2018-09-01
Printed in Japan



Lifting your dreams

TRUCK LOADER CRANE

Provisional

TM-ZX1500HRS

For Large Size Vehicles

CARGO CRANE



15t

TM-ZX1500HRS

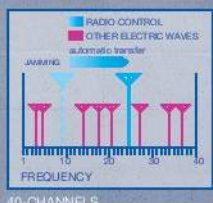
Cargo Crane
for Large Size
Vehicles

AML (Automatic Moment Limiter)

The AML that monitors crane work safety is equipped as standard and it provides a "strength monitoring" function, which prevents crane overloading, and a "stability monitoring" function, which prevents the crane from falling over.

High-Powered Radio Controller

Radio Controller with powerful transmitting output automatically selects a frequency free of jamming, out of as many frequencies as 40 channels, to avoid interference troubles.



Emergency stop button



RADIO REMOTE WITH LED DISPLAY HANDHELD CONTROLLER

The loader crane has an optional remote control, which employs a large-screen and power-saving color LCD display, has a feature that can customize speed adjustment for various operations, and has an emergency stop switch in addition to displaying actual load, rated load, and moment load ratio. The newly developed "load weight" function calculates and displays load weight during loading and unloading, enabling work progress and the load weight on the vehicle to be checked, which also prevents overloading. These features contribute to not only the safety of crane work, but also to the safety of the vehicle when it is traveling.

Note: TM-ZX1500HRS is a specification without radio controller.



WATER-RESISTANCE

STRONG HEPTAGONAL BOOM



TADANO's strong and light heptagonal boom made of high tensile steel thoroughly designed and well proven for its quality, strength and smoothness, with a rigid and fine-tuned telescoping boom providing comfortable crane operation.



TWO POWERFUL ELEVATING CYLINDERS

These cylinders use hydraulic, control, and processing technologies cultivated from more than 50 years of manufacturing experience. The two powerful hydraulic cylinders developed from this experience support a great work capacity.

CABLE FOLLOWER

The cable follower prevents disorderly cable (wire rope) winding by always pressing the cable onto the winch drum and puts the wire rope at a right position.

BOOM HEIGHT LIMIT FUNCTION



Working Height Limiter stops boom elevation and telescoping operations when the boom top height reaches a registered height.

HOOK IN

TADANO original HOOK IN system is equipped as standard and enhances work efficiency.



Note: Hook-in of 15 ton hook block is not possible.

ANTI-TWO-BLOCK FUNCTION

This function stops crane operation (hoisting up, boom elevation, and boom extension) when the hook block touches the weight, to prevent the hook block from hitting the boom head, and warns the operator with the buzzer.

AUTOMATIC SWING LOCK SYSTEM

The boom is mechanically locked securely at the boom post base to prevent accidental swinging out of the boom during traveling.



JACK INTERLOCK

Disables crane operation when the left or right jack is not in contact with the ground.



NEW CENTRALIZED PANELS AND LEVERS



Centralized control panels, which have operation switches and a lift chart required for crane operation, are installed on both sides of the boom post. The panel also has a three-color warning lamp, an outrigger extension width display lamp, and a digital display that shows the rated load and moment load ratio, and these contribute to better viewability.

THREE COLORS LIMIT WARNING LAMP

The external AML warning lamp uses long-life LEDs to show the moment load ratio in three colors, helping to prevent the crane from falling over and damage due to overloading, and other accidents.



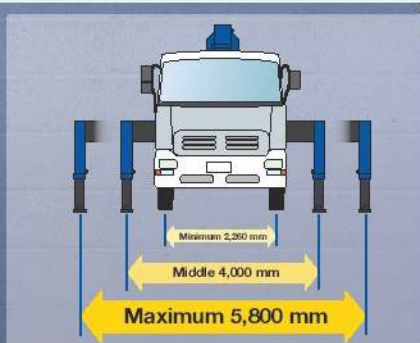
Note: Standard specification for TM-ZX1500HRS, optional for TM-ZX1500HS.

STRONG OUTRIGGER WITH SAFETY LOCK

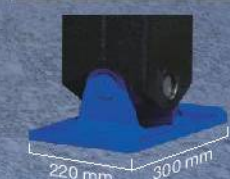
Strong 5.8 m width and powerful outriggers with box structure jacks, an easy and safe lock system together with new universal floats. The lock system is one of the advanced reliable TADANO standard safety systems.



OUTRIGGER LOCK PIN (Both sides)

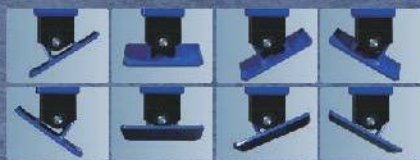


TILTABLE FRONT OUTRIGGER JACK FLOAT



220 mm 300 mm

The universal float moves 360 degrees to fit to any ground for better stability with less ground pressure due to large sized floats.



BIGGER HYDRAULIC TANK

REAR OUTRIGGER

Straight down type equipped as standard. (Bolt-on stroke adjustable type)

Note: This picture shows 4 parts of line setting for 6 ton lifting condition. 4 parts of line setting is necessary only for 6 ton lifting.

Lifting your dreams

TM-ZX1505HRS

(with radio control)

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

Retracted length 5.3 m
Extended length 18.5 m
Extending speed 13.2 m / 36 s
Elevation Elevated by a double-acting
Hydraulic cylinder
Elevating speed 0° to 78° / 26 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 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 3 sheaves - 9,000 kg capacity

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}

OUTRIGGERS

Hydraulically extended sliders and hydraulically extended jacks
Integral with crane frame Power up and down
Extended width Min. 2,260 mm
Mid. 4,000 mm
Max. 5,800 mm

REAR OUTRIGGERS

Hydraulically extended jacks
Power up and down
Width 2,250 mm

HYDRAULICS

Hydraulic pump Tandem 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. 130 L

RADIO CONTROLLER

Model : RCS-F

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

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)

Note: TM-ZX1505HS is a specification without radio controller.

SAFETY DEVICES

AML (Automatic Moment Limiter)
Load indication
Load moment ratio to rated load indication
Warning alarm
Over load limiter
Limit warning lamp
Limit warning lamp (three-color) (TM-ZX1505HRS)
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 - 15,000 kg capacity and boom point additional two sheaves
(Hook; 5 sheaves, swivel type hook with safety latch)
Limit warning lamp (three-color) (TM-ZX1505HS)

CRANE MASS

Approx. 5,220 kg
(include 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

Crane strength rated capacities

• 5.3-m boom

Load radius (m)	2.0 and below	2.5	3.0	3.5	4.0	4.5	4.88
Rated lifting capacity (kg)	15,000	12,000	10,000	8,750	7,500	6,600	6,100

• 8.6-m boom

Load radius (m)	3.5 and below	4.0	4.5	5.0	6.0	7.0	8.18
Rated lifting capacity (kg)	6,000	5,500	5,000	4,700	4,300	4,000	3,550

• 11.9-m boom


Load radius (m)	4.5 and below	5.0	6.0	7.0	8.0	9.0	10.0	11.48
Rated lifting capacity (kg)	4,100	3,900	3,500	3,200	3,000	2,800	2,600	2,300

• 15.2-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	14.78
Rated lifting capacity (kg)	4,000	3,800	3,600	3,300	3,000	2,800	2,600	2,400	2,200	2,000	1,850	1,750	1,650

• 18.5-m boom

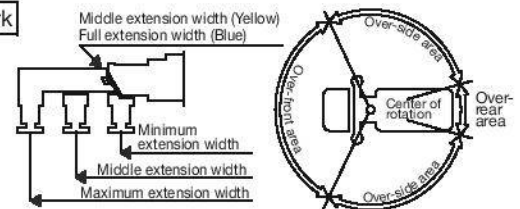
Load radius (m)	5.0 and below	6.0	7.0	8.0	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0	18.08
Rated lifting capacity (kg)	3,450	3,200	2,900	2,700	2,500	2,300	2,100	1,900	1,700	1,550	1,450	1,350	1,250	1,200

- Notes: 1. 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.
2. Rated Lifting Capacities in these tables depend on condition that crane is set level on firm level ground.
3. The mass of the hook (120 kg), slings and all similarly used load lifting devices must be added to the mass of the load.
4. For boom lengths not shown, use the rated lifting capacity of next longer boom.
5. 15.2 m boom means  mark on 4th boom section side plate is half seen.
6. Maximum load for number of part lines is as shown below. Load per line must not surpass 14.7 kN {1,500 kgf}.

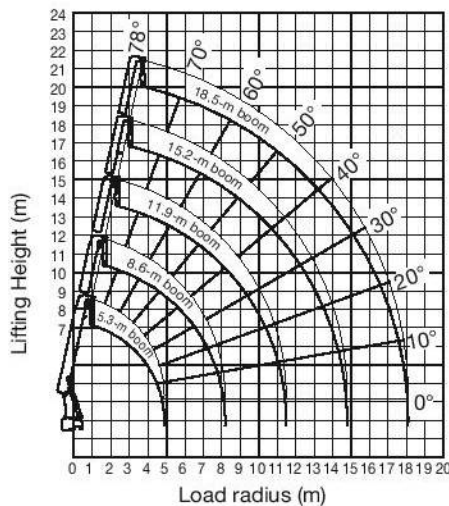
No. of part line	4	6	10
Maximum of load	6,000 kg	9,000 kg	15,000 kg

10-part line is optional hook only.

Extension mark

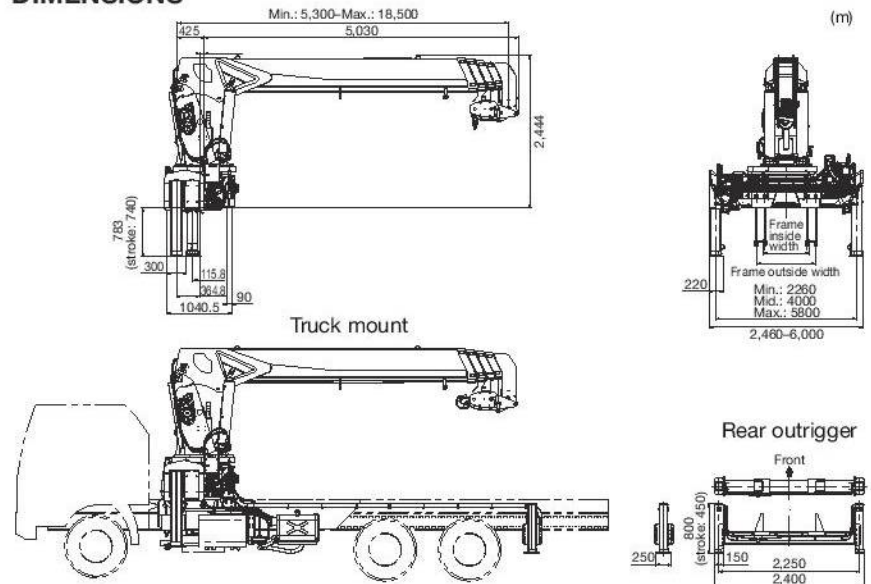


WORKING RANGE



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



Note: Some specifications are subject to change.



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Printed in Japan
2018-09-1