



Lifting your dreams

TRUCK LOADER CRANE

TM-ZX1500HRS/HS

For Large Size Vehicles

CARGO CRANE



Safer, stronger, farther — maximum performance through sensor monitoring.

"Crane operation is more stable with a load in the bed."

It's something we've always known, but until now could only rely on the operator's experience and senses to know how far was too far.

The TM-ZX1500's equipped sensors, however, measure cargo load weight and reflect that sense of stability in crane functionality.

TM-ZX1500HRS/HS

Cargo Crane
for Large Size
Vehicles

RADIO CONTROLLER WITH COLOR LCD* DISPLAY *Liquid-Crystal Display

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-ZX1505HS model does not include controller.



WATER-
RESISTANCE
[IPX6K]

Emergency stop button



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.



Manually entering the number of parts of line in use allows for fine-tuned controls. As the crane approaches rated performance, warning alarms and lamps (on radio controller, limit warning lamps (three-color)*, operating panel) are triggered. As an extra level of safety, operation is automatically stopped once critical parameters are reached. This system helps support both safety and ease-of-use for the operator.

*Optional for TM-ZX1505HS.

- Safety AML System
- OUTRIGGERS ASYMMETRIC EXTENSION WIDTH CONTROL

See p. 5-6



TM-ZX 1500HRS/HS

Cargo Crane for Large Size Vehicles

LIMIT WARNING LAMPS (THREE-COLOR)*

The external AML warning lamp uses 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.



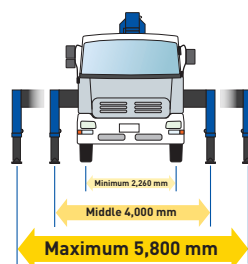
*Optional for TM-ZX1505HS.

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. Left and right outriggers can also be exchanged with no change in functionality.



OUTRIGGER LOCK PIN (Both sides)



TWO POWERFUL ELEVATING CYLINDERS

These cylinders use hydraulic, control, and processing technologies cultivated from more than 50 years of manufacturing experience, supporting greater work capacity.

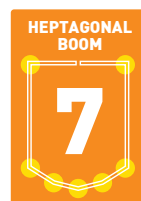


REAR OUTRIGGER

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

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.



BIG HYDRAULIC TANK

Big hydraulic tank with approximately 130 liter capacity.

BOOM HEIGHT LIMIT FUNCTION

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

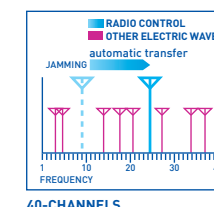


ANTI-TWO-BLOCK FUNCTION

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

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.



40-CHANNELS

AUTOMATIC SLEWING LOCK SYSTEM

The boom is mechanically locked securely at the boom post base to prevent the boom from accidentally slewing out during travel.



HOOK IN / OUT SYSTEM

TADANO original HOOK IN system is equipped as standard and enhances work efficiency. During hook out, the boom hoists automatically to avoiding hitting cargo.



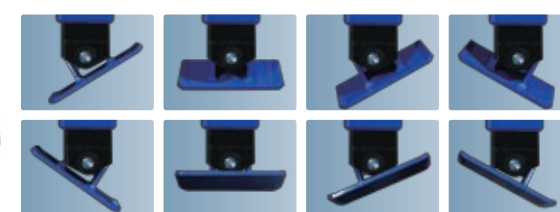
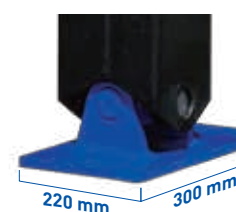
Note: Hook-in of 15 ton hook block is not possible.

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.

TILTABLE FRONT OUTRIGGER JACK FLOAT

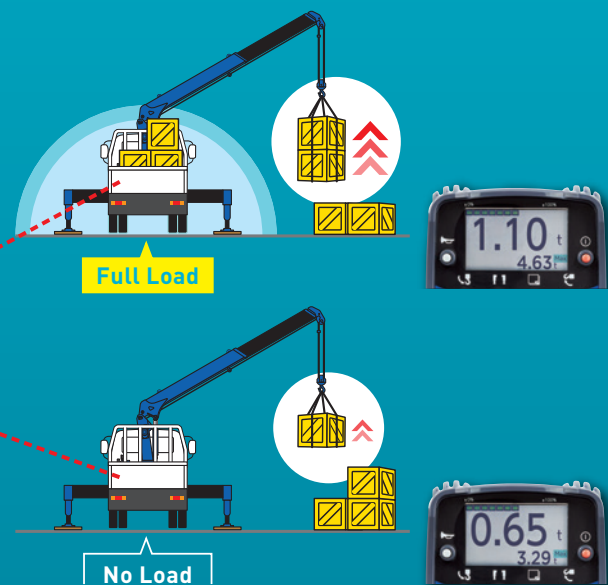
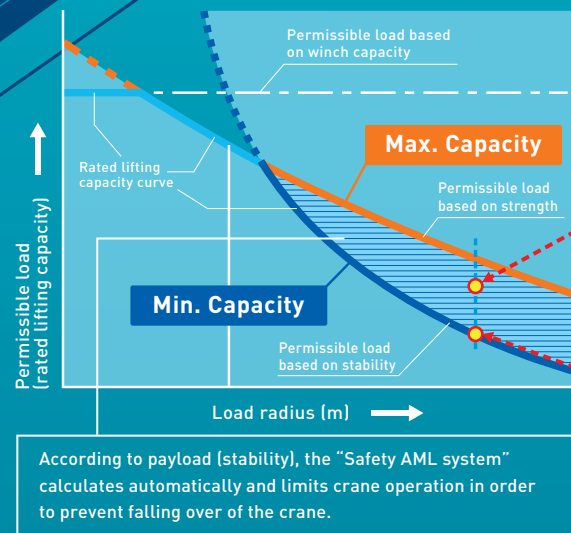
The universal float rotates 360 degrees to fit any ground, for better stability. Large floats reduce ground pressure.



Safety AML System

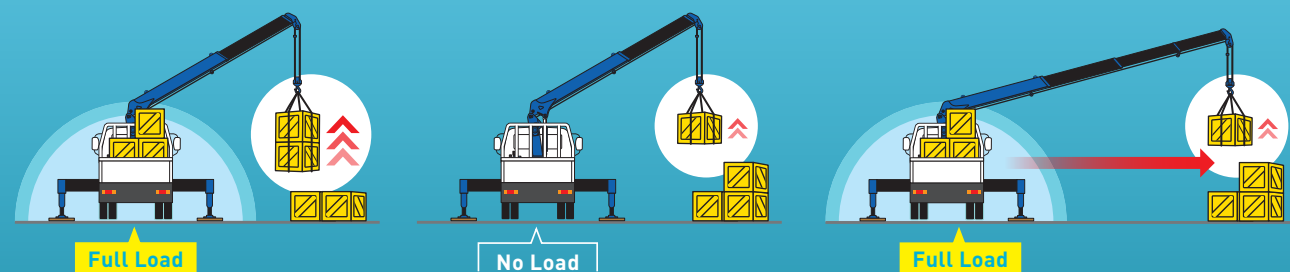


This is a completely new system that monitors a series of operations regarding both stability and strength from when the vehicle is fully loaded until it is empty. This system enables work to be performed safely while taking full advantage of the crane's capabilities and significantly broadens the scope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



Carry heavier loads when close

Carry loads farther when light



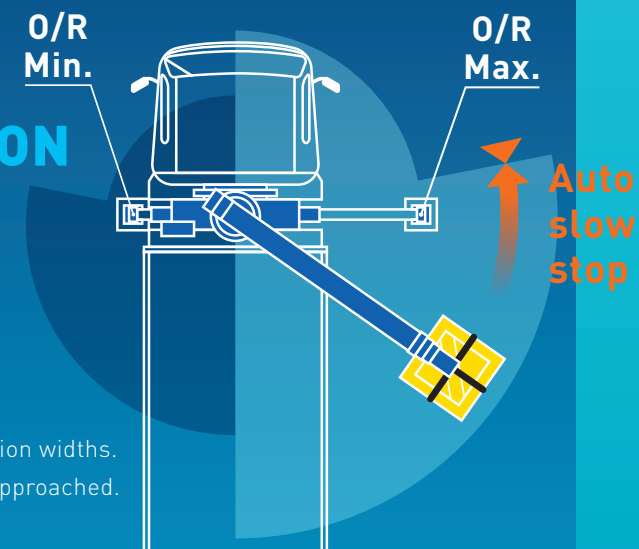
Calculations are automatic based on loaded cargo (stability), allowing you to carry heavier loads farther when fully loaded.



OUTRIGGERS ASYMMETRIC EXTENSION WIDTH CONTROL

Optimum lifting performance
at any outrigger width!

Constantly monitors slewing angle and difference in outrigger extension widths. Operation automatically slows and stops as critical parameters are approached.



RADIO CONTROLLER WITH COLOR LCD* DISPLAY *Liquid-Crystal Display

The liquid crystal display constantly shows operating information such as hook load, rated load and moment load ratio.

Actual load

Rated lifting capacity



JACK INTERLOCK

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



SAFETY LAMP EQUIPPED CENTRALIZED CONTROL PANEL

The control panel is equipped with a two-stage warning. As operation begins to approach critical levels, safety lamps begin to flash (preliminary warning). If operation continues past this point, warning lights grow more intense once the danger level reaches 100% (limit warning).

Limit warning lamp

LIMIT WARNING LAMP

Warning lights on the control panel, remote control and vehicle limit warning lamps (three-color)* work in tandem, increasing safety by ensuring warning lights are visible even at a distance from the crane.



*Optional for TM-ZX1505HS.

Rated lifting capacities display

Empty chassis rated lifting capacities (t) and load ratio (%) can be displayed with display switching function.

Mode display

Actual road (t) and total PTO ON time (hrs) can be displayed with display switching function.



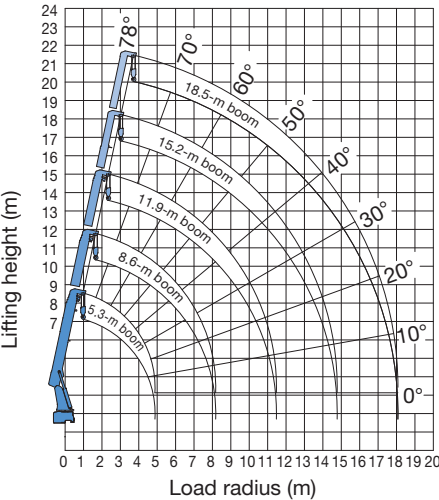
TM-ZX1500HRS/HS

TECHNICAL SPECIFICATIONS

MODEL	TM-ZX1505HRS	TM-ZX1505HS
CRANE CAPACITY	15,000 kg at 2.0 m (10 parts of line) 8,750 kg at 3.5 m (6 parts of line)	
BOOM	Fully powered partly synchronized telescoping boom of heptagonal box construction with 4 sheaves at boom head.	
Sections	5	
Length	5.3 m-18.5 m	
Extension speed	13.2 m / 36 s	
Elevation	Elevated by two double-acting Hydraulic cylinders.	
Elevating range/speed	0° to 78° /26 s	
Max. lifting height*	Approx. 20 m*	
Max. load radius*	18.07 m*	
WINCH	Hydraulic motor driven. Spur gear speed reduction, provided with mechanical brake and cable follower.	
Max. single line pull	14.72 kN (1,500 kgf)	
Max. single line speed	62 m/min. (at 4th layer)	
Wire rope (Diameter x length)	10 mm x 107 m	
Wire rope (Breaking strength)	73.5 kN (7,500 kgf)	
Wire rope (Construction)	7 x 7 + 6 x Fi (29)	
Hook block	9,000 kg capacity, 3 sheaves (110 kg)	
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 operated beams and jacks, Integral with crane frame.	
Extended width	Max. : 5.8 m, Mid. : 4.0 m , Min. : 2.26 m (center to center) Max. : 6.0 m, Mid. : 4.2 m , Min. : 2.46 m (outer to outer)	
REAR OUTRIGGERS	Hydraulically operated jacks.	
Width	2.25 m (center to center)	
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	—
Frequency	40 frequencies in 433 MHz band	
Operating power supply		
Transmitter	6 V DC, Dry battery R6 P(SUM-3) x 4	
Control unit	24 V DC, Vehicle battery	
Transmitter mass	Approx. 674 g (includes batteries)	
STANDARD SAFETY DEVICES	•AML(Automatic Moment Limiter) 〈Load indication, Load moment ratio to rated load indication, Warning alarm, Over load limiter (stop), Limit warning lamp, Limit warning lamps (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-15,000 kg capacity (110 kg) and boom point additional sheave (Hook block: 5 sheaves, swivel type hook with safety latch)	
CRANE MASS	Approx. 5,200 kg (include rear outrigger, hydraulic oil tank and hydraulic oil except mounting parts)	
SUITABLE TRUCKS	Gross vehicle weight (including crane mass) 25,000 kg min.	

Note: Operating speeds of the crane are guaranteed under the condition that the pump delivery is 85 L/ min.
*Boom deflection, and subsequent radius and boom angle change must be accounted for when applying load to hook.
**Optional for TM-ZX1505HS.
***TM-ZX1505HRS only.

WORKING RANGE (4 parts of 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.

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.



MAINTENANCE COCK

Convenient when carrying out maintenance such as when changing hydraulic oil or parts.



RATED LIFTING CAPACITIES

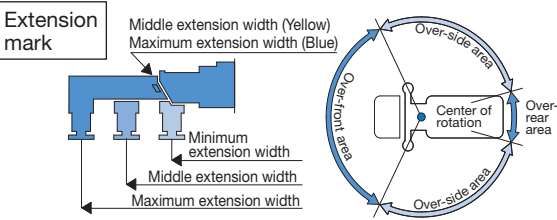
Crane strength rated capacities <Over-side, over-rear area> (Over-front area: 25% of empty chassis rated lifting capacity.)

5.3-m boom																
Load radius (m)			2.0 ^{and below}	2.5	3.0	3.5	4.0	4.5	4.87							
Rated lifting capacity (kg)			15,000	12,000	10,000	8,750	7,500	6,600	6,100							
Empty chassis	Extension width of outriggers	Max.	15,000	12,000	10,000	8,750	7,500	6,600	6,100							
		Mid.	15,000	12,000	10,000	7,200	5,400	4,250	3,600							
		Min.	8,000	5,000	3,500	2,650	2,050	1,600	1,350							
● 8.6-m boom																
Load radius (m)			3.0 ^{and below}	3.5	4.0	4.5	5.0	6.0	7.0	8.17						
Rated lifting capacity (kg)			6,000	6,000	5,500	5,000	4,700	4,300	4,000	3,550						
Empty chassis	Extension width of outriggers	Max.	6,000	6,000	5,500	5,000	4,700	4,300	3,150	2,250						
		Mid.	6,000	6,000	5,250	4,150	3,350	2,350	1,700	1,200						
		Min.	3,400	2,500	1,900	1,500	1,200	750	400	150						
● 11.9-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				
Rated lifting capacity (kg)			4,100	4,100	4,100	3,900	3,500	3,200	3,000	2,800	2,600	2,300				
Empty chassis	Extension width of outriggers	Max.	4,100	4,100	4,100	3,900	3,500	3,150	2,350	1,900	1,550	1,150				
		Mid.	4,100	4,100	4,100	3,350	2,350	1,700	1,300	1,000	750	450				
		Min.	2,500	1,900	1,500	1,200	750	400	200	150	–	–				
● 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	14.77	
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	
Empty chassis	Extension width of outriggers	Max.	4,000	3,800	3,600	3,300	3,000	2,350	1,900	1,550	1,300	1,100	950	800	700	
		Mid.	4,000	3,800	3,350	2,350	1,700	1,300	1,000	750	550	450	350	250	220	
● 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	18.07
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
Empty chassis	Extension width of outriggers	Max.	3,450	3,200	2,900	2,350	1,900	1,550	1,300	1,100	950	800	700	600	500	450
		Mid.	3,350	2,350	1,700	1,300	1,000	750	550	450	350	250	220	200	180	150

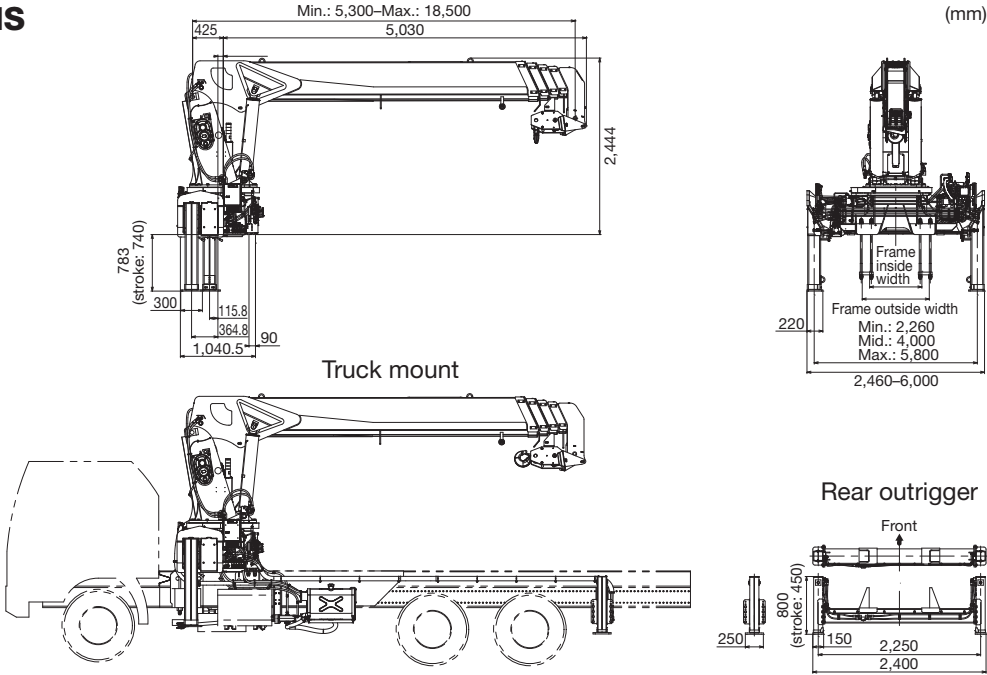
- Notes:
- When the working state approaches the stability limit or the strength limit, warns with the limit warning lamp and the buzzer. When the working state reaches the limit, the buzzer continues to sound.
 - When the operation exceeding the rated lifting capacity is performed, the operation stops automatically.
 - 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.)
 - This value have been calculated on the basis of ISO 15442.
 - This value includes the mass of lifting devices such as hook block (110 kg).
 - This load radius shows actual load radius which includes boom deflection.
 - 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.
 - If the boom length exceeds the table value even a little, the performance is limited to the performance of the next boom length.
 - 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.

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

10 parts of line is optional hook only.



DIMENSIONS



Note: Some specifications are subject to change.

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