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# TM-ZE550HRS Series

TM-ZE553HRS

TM-ZE554HRS

TM-ZE555HRS



Reaching new  heights



# Tadano quality: advanced safety and power in a single package

The TM-ZE550HRS is a more powerful crane that comes with the sophisticated, high-quality Safety Eyes system as standard equipment. It delivers greater safety and peace of mind.

## TM-ZE550HRS



### Safety Eyes

See p. 3



### Radio Controller with Color LCD\* Display

\*Liquid Crystal Display

A radio controller for remotely operating the crane is provided as standard. In addition to displaying the actual load, rated load, and moment load ratio, it also features 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 function. The "load weight" function makes it possible to check the work progress and the load weight on the vehicle, and also prevents overloading. These features contribute not only to the safety of crane work, but also to the safety of the vehicle when it is traveling.

\*\*The IP rating indicates waterproofness and dust protection as defined in IEC 60529. An IP66K rating indicates an exceptional level of waterproofness and dust protection ensuring peace of mind.



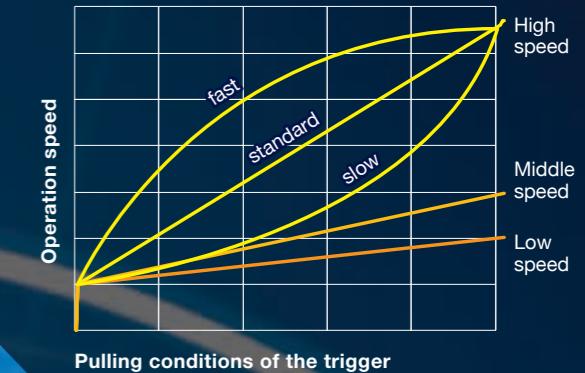
WATER-  
PROOFNESS  
[IP66K\*\*]

Stop Switch



### Feeling Operation

The operation speed of the machine when the trigger is pulled can be increased or decreased from the standard speed.



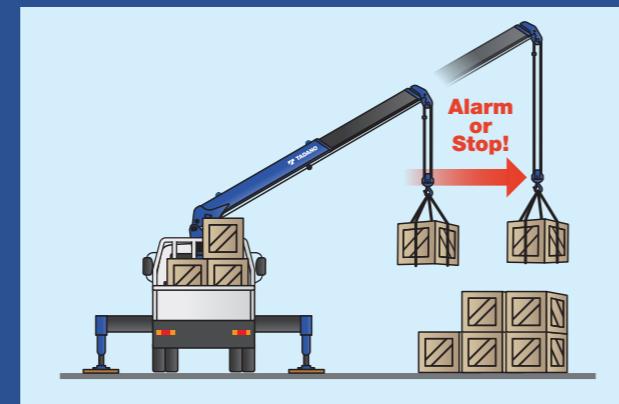


## AML (Automatic Moment Limiter)

The HS and HRS Series are equipped with an AML that monitors crane work safety. It includes a strength monitoring function which prevents crane overloading, and a stability monitoring function which prevents the crane from tipping over.

As the crane approaches rated performance, warning alarms and lamps are triggered. As an extra level of safety, operation is automatically stopped or warning alarms are triggered once critical parameters are reached.

This system supports safety and ease-of-use for the operator.



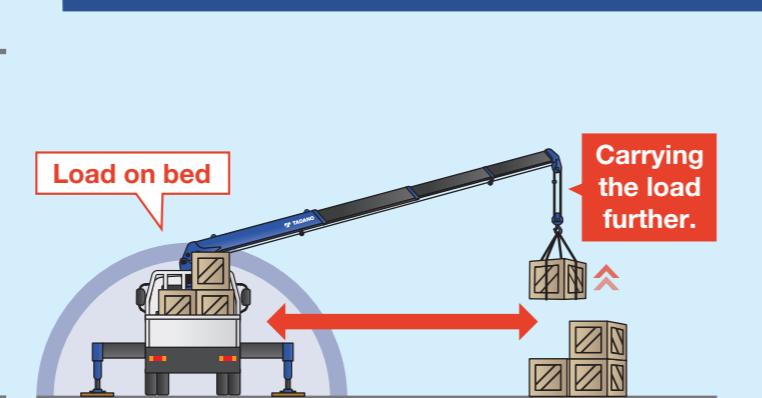
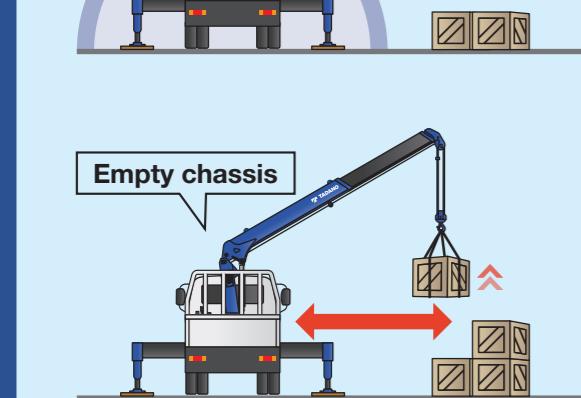
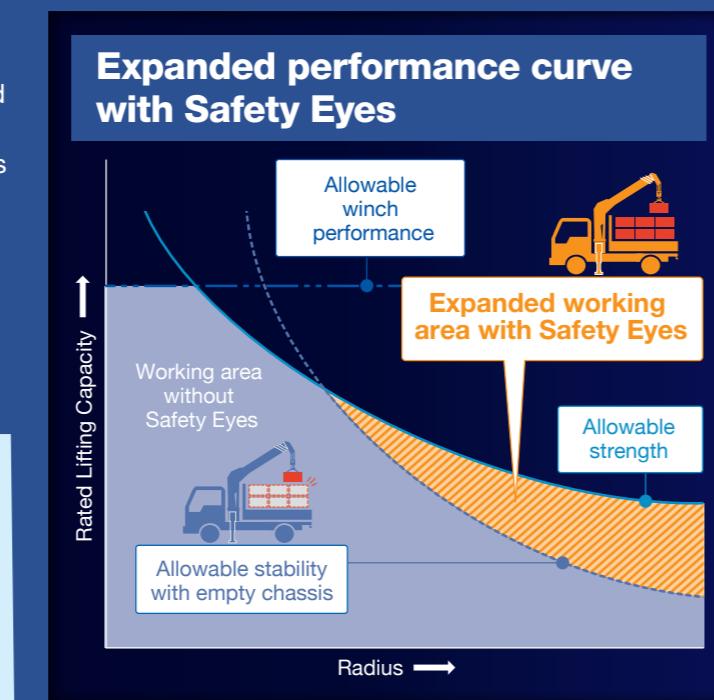
## Safety Eyes

Achieves improvements to both safety and performance.

In addition to the AML monitoring system, the ground contact reaction force of the jacks is monitored at all times, enabling improved performance when a load is present compared to when the vehicle is empty.

According to the payload (stability), Safety Eyes calculates automatically and limits crane operation in order to prevent the crane from tipping over.

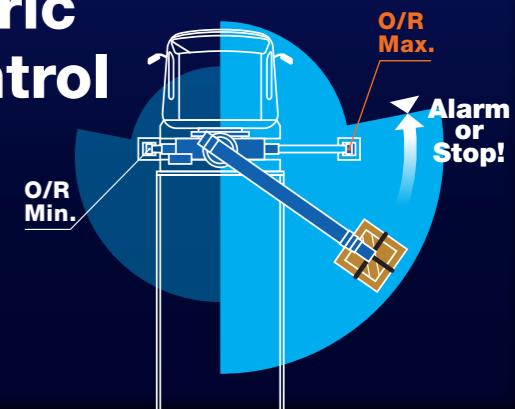
\* Depending on the regulations in each country, the regular Eyes specifications with the AML only may be provided in some cases.



## Outriggers Asymmetric Extension Width Control

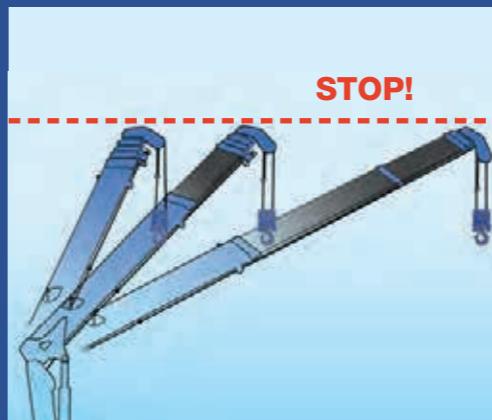
### Optimum Lifting Performance at Any Outrigger Width

Constantly monitors the slewing angle and difference in outrigger extension widths. Crane motion is controlled according to the extension width of each outrigger.



## Working Height Limit Function

This function presets the upper limit of the boom height (stop position). This is highly effective in work sites where attention is required to the boom height, such as under power lines and indoors.



## Jack Interlock

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



## Centralized Control Panel Equipped with Safety Lamp

The lifting chart and switches for crane operation are grouped on both sides of the control panel, and warning lights are installed at the top of the panel.

### Limit warning lamp

#### Outrigger extension state

Indicator lamp displays the outrigger extension width.

#### Mode indicator

Displays the actual load, height limit value, error code, etc.



## Limit Warning Lamps

The warning lights on the control panel, moment indicator in the radio controller, three-color limit warning lamp on the crane post, and warning alarm function interlinked with one another.



## Powerful Heptagonal Boom

Tadano's unique heptagonal boom is made of high-tensile steel. The boom structure consists of a single piece of steel plate for lower boom weight and more powerful lifting capacity. Special valves enable smooth boom extension and retraction for smoother operation to reduce shock when telescoping the boom.

The cables and sheaves are all internal - for a clean, clutter-free appearance.



## Hook-in/out System

Tadano's hook-in system is equipped as standard and enhances work efficiency. During hook-out, the boom raises automatically to avoid hitting cargo.



## Stop Switch

Use this switch to stop machine movement if the machine cannot be controlled during crane operation, or in an emergency. (Outrigger operation does not stop.)

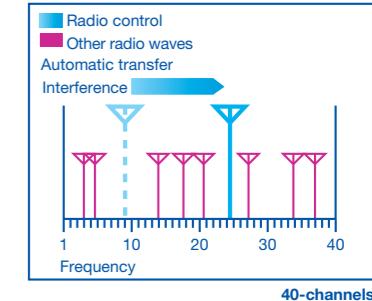


## Anti-two-block Function

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.

## Automatic Slewing Lock System

This system prevents accidental boom slewing when no slewing operation takes place.



## High-powered Radio Controller

Radio Controller with powerful transmitting output automatically selects a frequency free of interference out of as many as 40 channels to avoid trouble caused by interference.

## Cable Follower

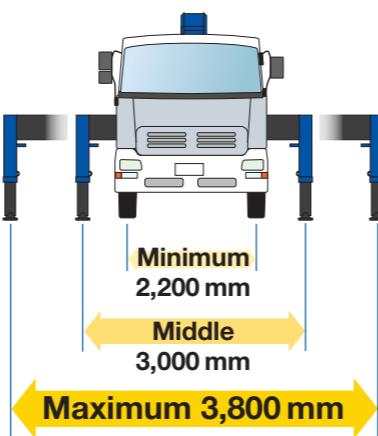
The cable follower prevents disorderly cable (wire rope) winding by always pressing the cable onto the winch drum, and keeps the wire rope in the right position.

# TM-ZE550HRS

## Truck Loader Crane for Medium/Large Size Vehicles

## Broader Outrigger Width

The outriggers enable to secure a three-stage extension width up to a maximum of 3.8 meters, substantially enhancing crane performance.



## Outrigger Mechanism for Quicker Work

The outrigger beams can be easily operated, using a grip to lock or release and extend or retract them. To further ensure safety, the lock system prevents the outrigger beams from extending during traveling. A spirit level is provided as standard equipment.



# TM-ZE550HRS series

## Technical Specifications

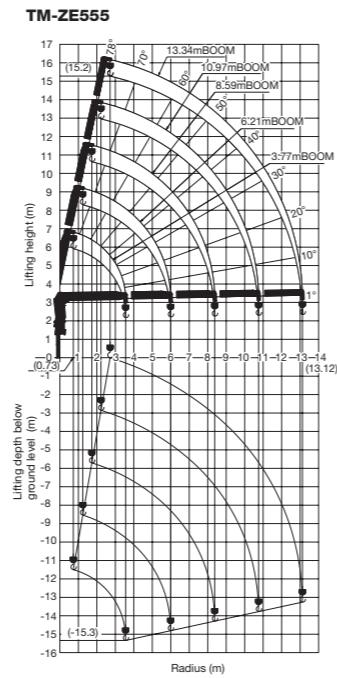
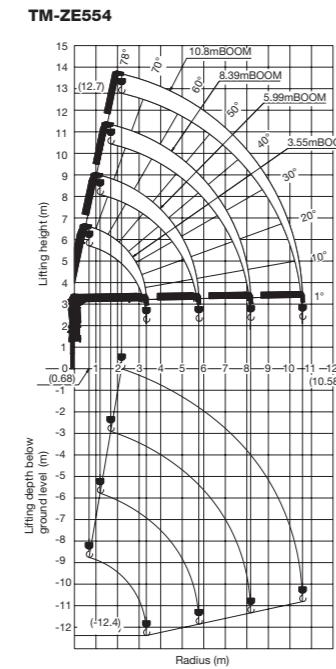
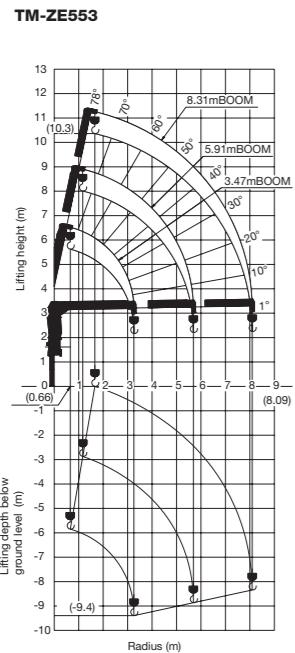
Model	TM-ZE553HRS	TM-ZE554HRS	TM-ZE555HRS
CRANE CAPACITY		5,050 kg at 2.5 m (5-part line)	
BOOM	Three-sectioned, fully hydraulic telescoping boom of heptagonal box construction	Four-sectioned, fully powered partly synchronized telescoping boom of heptagonal box construction	Five-sectioned, fully powered partly synchronized telescoping boom of heptagonal box construction
Retracted length	3.47 m	3.55 m	3.77 m
Extended length	8.31 m	10.8 m	13.34 m
Extending speed	4.84 m in 18 s	7.25 m in 21 s	9.57 m in 25 s
Elevation		Elevated by a double-acting hydraulic cylinder	
Raising speed	1° to 78° in 12 s		
Boom point	3 sheaves		
WINCH	Hydraulic motor driven spur gear speed reduction, provided with mechanical brake and cable follower.		
Single line pull	9.90 kN(1010 kgf)		
Single line speed	66 m/min (at 4th layer)		
Wire rope (Diameter x length)	8 mm x 67 m	8 mm x 82 m	8 mm x 97 m
Wire rope (Breaking strength)	50.1 kN(5.1 t)		
Wire rope (Construction)	7 x 7 + 6 x WS(26)		
Hook block	2 sheaves		
HOOK STOWING DEVICE	Hook-in (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	2.5 min⁻¹ (rpm)		
OUTRIGGERS	Manually operated beams and hydraulically operated jacks integral with crane frame.		
Extension width	Min. 2,200 mm center to center(2,360 mm outer to outer), Mid. 3,000 mm center to center(3,160 mm outer to outer), Max. 3,800 mm center to center(3,960 mm outer to outer)		
HYDRAULIC SYSTEM			
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. 57.6L		
RADIO CONTROLLER	Model : RCS-F (with colored display), Control functions of telescoping, hoisting up and down, elevating, slewing, acceleration, Hook-in, Hook-out, hom, stop operation, outrigger operation and working height limit.		
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. 670 g (includes batteries)		
SAFETY DEVICES	•Anti-two-block-device •AML (Automatic Moment Limiter) <Load indication, Load moment ratio indication, Warning alarm, Rated capacity indicator/limiter or Rated capacity indicator, Limit warning lamp, Outrigger length detector, Outrigger asymmetric extension width control> •WHL (Working Height Limiter) •Boom angle indicator •Load indicator •Load meter •Over-unwinding prevention •Hook safety latch •Spirit level •Jack interlock •Stop switch on radio controller •Hydraulic safety valves, check valves and holding valves •Limit warning lamp (three-color) •Emergency stop switch •Boom outrigger stowed warning		
OPTIONAL EQUIPMENT	•Emergency hydraulic pump •Outrigger pads •Oil cooler •Tiltable jack float •Rear outriggers (outrigger beam non-extension type)		
CRANE MASS	Approx. 1,520 kg (Except crane options and mounting parts.)	Approx. 1,640 kg (Except crane options and mounting parts.)	Approx. 1,810 kg (Except crane options and mounting parts.)

Note: Each operating speeds show the value when there is no load conditions and the pump delivery is the following conditions.

•36 L/min (Slewing speed)

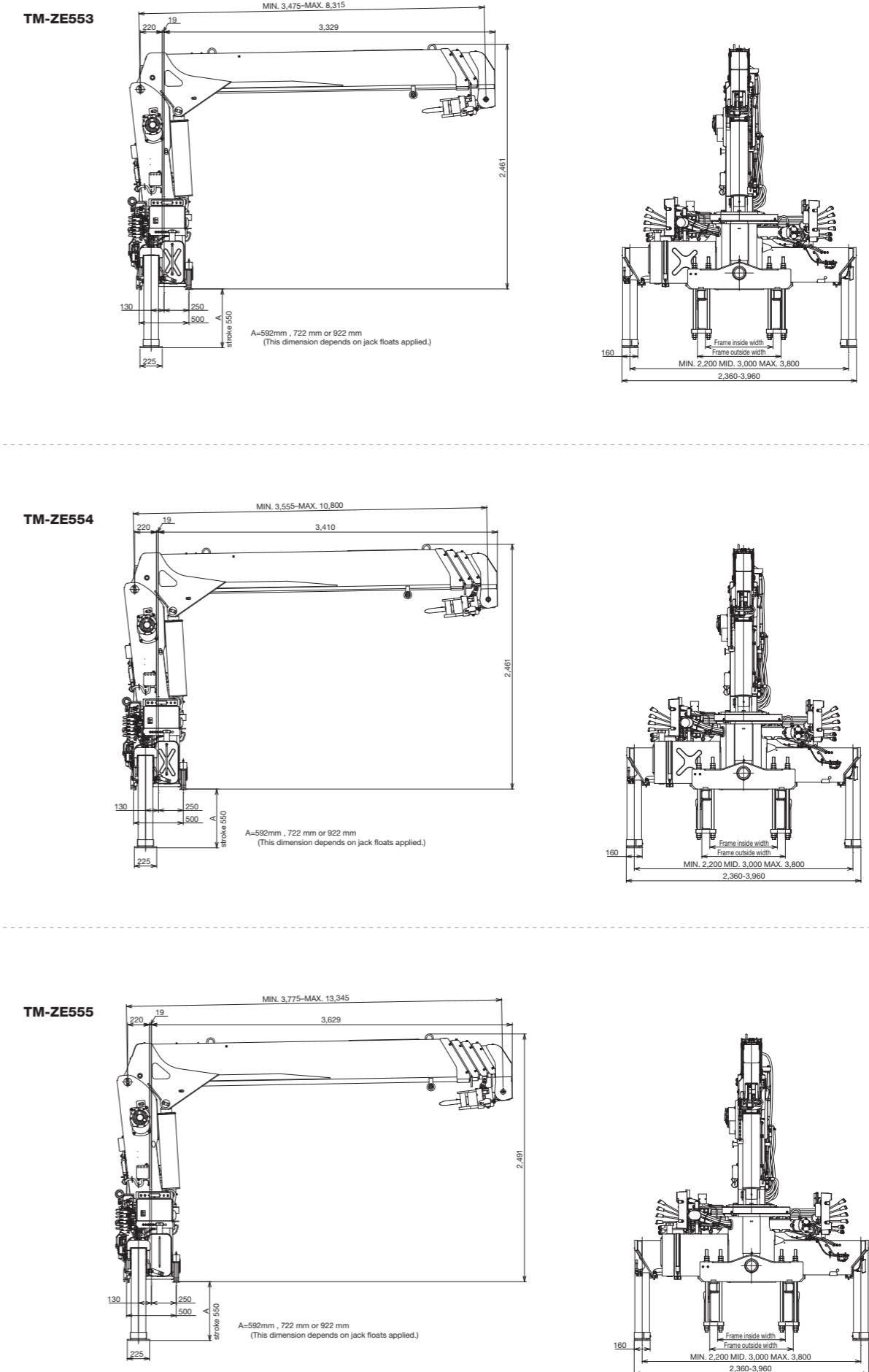
•60 L/min (•BOOM: Extending speed, Raising speed •WINCH: Single line speed)

## 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



# TM-ZE550HRS series

## Rated Lifting Capacities

Table A

TM-ZE553HRS											
● 3.47 m Boom											
LOAD RADIUS (m)	2.5 and below	2.95	3.25								
CRANE STRENGTH	5,050	4,050	3,700								
EMPTY CHASSIS width of outriggers MAX	5,050	3,850	3,280								
CHASSIS width of outriggers MIN	2,480	2,000	1,780								
● 5.91 m Boom											
LOAD RADIUS (m)	2.6 and below	2.8	2.95	3.8	4.1	4.5	5.0	5.5	5.69		
CRANE STRENGTH	4,050	4,050	4,050	3,130	2,930	2,630	2,380	2,180	2,080		
EMPTY CHASSIS width of outriggers MAX	4,050	4,050	3,850	2,680	2,430	2,030	1,730	1,430	1,380		
CHASSIS width of outriggers MIN	2,380	2,130	2,000	1,330	1,180	980	880	730	680		
● 8.31 m Boom											
LOAD RADIUS (m)	2.6 and below	3.0	3.4	3.8	4.1	4.5	5.0	5.5	6.0	6.5	7.0
CRANE STRENGTH	3,130	3,130	3,130	3,130	2,930	2,630	2,380	2,180	2,080	1,830	1,530
EMPTY CHASSIS width of outriggers MAX	3,130	3,130	3,130	2,680	2,430	2,030	1,730	1,430	1,380	930	830
CHASSIS width of outriggers MIN	2,380	1,950	1,530	1,330	1,180	980	880	730	680	580	530
● 10.8 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	10.58	
CRANE STRENGTH	2,130	2,130	2,130	2,030	1,780	1,530	1,380	1,200	1,050	1,000	
EMPTY CHASSIS width of outriggers MAX	2,130	2,130	1,980	1,630	1,180	1,000	800	680	580	550	
CHASSIS width of outriggers MIN	1,480	1,180	930	780	580	450	380	330	270	240	
● 13.34 m Boom											
LOAD RADIUS (m)	5.0 and below	6.0	7.0	8.0	9.0	10.0	11.0	12.0	13.12		
CRANE STRENGTH	1,430	1,330	1,230	1,080	980	880	800	730	650		
EMPTY CHASSIS width of outriggers MAX	1,430	1,130	900	700	550	500	430	400	350		

Notes:

1. Rated capacity indicator issues warning with the limit warning lamp and the buzzer when the working state approaches limit or the strength limit.
2. When the AML is equipped with the rated capacity limiter, an operation stops automatically if the rated lifting capacity is exceeded.
3. When the crane is front mounted, set up the front outriggers so that the front wheels are slightly in contact with the ground. (If tire deformation is large, AML may activate earlier.)
4. Empty Chassis Rated Capacities in these tables depend on condition that crane is set level on firm level ground.
5. This value includes the mass of lifting devices such as hook block (45kg).
6. When the outriggers are extended to the middle width, read the capacities rated for the minimum extension width.
7. This load radius shows actual load radius which includes boom deflection.
8. 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.
9. If the boom length exceeds the table value even a little, the performance is limited to the performance of the next boom length.
10. TM-ZE554HRS : When the boom length is 8.39 m, a half of the mark on lateral face of the 3rd boom section is exposed out of 2nd boom section.
11. Empty chassis rated lifting capacity varies according to the working area.
  - Front mounting <over-side, over-rear area>: 100% <over-front area>: 25% (\*1) or 60% (\*1) or 100% (\*1)
  - Rear mounting <over-front, over-rear area>: 100% <over-side area>: 30%
12. Empty Chassis Rated Capacities table A, B, C and D depend on the types of chassis. (The following table shows guidelines for bodywork vehicles that can achieve the rated lifting capacity tables A, B, C and D for vehicles. Be sure to carry out a stability inspection to determine which performance to apply.)

Table B

TM-ZE553HRS											
● 3.47 m Boom											
LOAD RADIUS (m)	2.5 and below	2.95	3.25								
CRANE STRENGTH	5,050	4,050	3,700								
EMPTY CHASSIS width of outriggers MAX	5,050	3,850	3,280								
CHASSIS width of outriggers MIN	2,480	2,000	1,780								
● 5.91 m Boom											
LOAD RADIUS (m)	2.6 and below	2.8	2.95	3.8	4.1	4.5	5.0	5.5	5.69		
CRANE STRENGTH	4,050	4,050	4,050	3,130	2,930	2,630	2,380	2,180	2,080		
EMPTY CHASSIS width of outriggers MAX	4,050	4,050	3,850	2,680	2,430	2,030	1,730	1,430	1,380		
CHASSIS width of outriggers MIN	2,380	2,130	2,000	1,330	1,180	980	880	730	680		
● 8.31 m Boom											
LOAD RADIUS (m)	2.6 and below	3.0	3.4	3.8	4.1	4.5	5.0	5.5	6.0	6.5	7.0
CRANE STRENGTH	3,130	3,130	3,130	3,130	2,930	2,630	2,380	2,180	2,080		
EMPTY CHASSIS width of outriggers MAX	3,130	3,130	3,130	2,680	2,430	2,030	1,730	1,430	1,380		
CHASSIS width of outriggers MIN	2,380	2,130	2,000	1,330	1,180	980	880	730	680		
● 10.8 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	10.58	
CRANE STRENGTH	2,130	2,130	2,130	2,030	1,780	1,530	1,380	1,200	1,050	1,000	
EMPTY CHASSIS width of outriggers MAX	2,130	2,130	1,980	1,630	1,180	1,000	800	680	580	550	
CHASSIS width of outriggers MIN	1,480	1,180	930	780	580	450	380	330	270	240	
● 13.34 m Boom											
LOAD RADIUS (m)	5.0 and below	6.0	7.0	8.0	9.0	10.0	11.0	12.0	13.12		
CRANE STRENGTH	1,430	1,330	1,230	1,080	980	880	800	730	650		
EMPTY CHASSIS width of outriggers MAX	1,430	1,130	900	700	550	500	430	400	350		

Table C

TM-ZE553HRS											
● 3.47 m Boom											
LOAD RADIUS (m)	2.5 and below	2.95	3.25								
CRANE STRENGTH	5,050	4,050	3,700								
EMPTY CHASSIS width of outriggers MAX	5,050	4,050	3,700								
CHASSIS width of outriggers MIN	3,230		2,730								
● 5.91 m Boom											
LOAD RADIUS (m)	2.6 and below	2.8	2.95	3.8	4.1	4.5	5.0	5.5	5.69		
CRANE STRENGTH	4,050	4,050	4,050	3,130	2,930	2,630	2,380	2,180	2,080		
EMPTY CHASSIS width of outriggers MAX	4,050	4,050	4,050</								