

**ROUGH TERRAIN CRANE** 

## **GR-1300XL-4**

130 TON (118.0 METRIC TON) CAPACITY

# 

TADANO

Photo: optional model

## **Next-Generation 130 Ton RT**

The GR-1300XL-4 is redefining the rough terrain crane market. Its six-section boom can extend up to 183.7 feet using a reliable telescoping pinning system, making it the longest boom of any rough terrain crane in the 130 US ton weight class. With a compact carrier length of just 28 feet on a two-axle system and a self-removable counterweight, the GR-1300XL-4 can be transported to job sites easily and efficiently. Tadano's "Smart Chart" is also on-board, allowing the crane's work performance to be maximized.

The GR-1300XL-4's new design offers improved safety, greater work efficiency, environmental integrity and exceptional quality. This new, next-generation crane is ready to work for you.

Crane capacity: 130 ton (118.0 metric ton) 6-section boom: 40.0 ft - 183.7 ft (12.2 m - 56.0 m) 2-staged bi-fold jib: 33.8 ft / 59.1 ft (10.3 m / 18.0 m)

Maximum lifting height: 182.1 ft (55.5 m) [Boom] 237.9 ft (72.5 m) [Boom + Jib] Maximum load radius: 175.0 ft (53.3 m) [Boom] 205.0 ft (62.5 m) [Boom + Jib]

Overall length: approx. 48' 2-3/4" (14,700 mm) Overall width: approx. 10' 10-1/2" (3,315 mm) Overall height: approx. 13' (3,950 mm)



Superstructure	Carrier	
Ultimate Boom for Rough Terrain Crane	03 Travel Speed	09
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Single Telescopic Cylinder Boom Asymmetric Outriager Extension Width Control	Standard Equipment	
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(10.0)	- 56 0 m)	
(12.21	- <b>30.0</b> m)	
Two-Trailer Transpo	rtation	
COUNTERWEIGHT 43.500 Ibs		
(19,800 kg)		
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## Superstructure

The rounded boom is made of high-tensile steel, which allows for decreased boom weight as well as increased boom strength. In addition, the high-performance AML-E ensures operational safety.

#### Longest Boom and Speedy Operation

Max. boom length: 183.7 ft (56.0 m)

Telescoping mechanism: Single hydraulic cylinders with pinning system Boom sections: 6

#### **New Superstructure Frame**

When developing the crane structure, importance is attached to the shape that is best suited for crane operation. FEM analysis is used to create the design. It is also important that the slewing structure be true to Tadano's original concept and be both rigid and compact while maintaining a desirable overall height. \*FEM: Finite Element Method



## NEW DESIGN

Emergency Engine Stop Switch





#### Outrigger Control Panel



#### Winch Drum Camera





-Stowed position when transporting

#### **Two-Roll Sunshade**



Adjustable in any position

Longer Wiper Blade

**Flat Windshield** 

#### Photo: optional mode

Both the main winch and the auxiliary winch have powerful line pull and operate at high speeds thus enhancing work efficiency. \*Maximum permissible line pull may be affected by wire rope strength.

with Cable Follower

**Two Winches** 



Cab tilt indicator and switch

#### **Tiltable Cab**

You can operate the crane comfortably by tilting the cab during high hoisting operations such as lifting with the jib. The cab tilting angle is between  $0^{\circ}$  and  $20^{\circ}$ .



Catwalk for Easy Access to Cab

## **Optimally-Designed Cab**

27.8

10

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0

63.0

73

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Crane cab and equipment designed for safety and operational efficiency.

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### Load Moment Indicator [AML-E]

#### Large Multi-Function Display

The 10.4-inch color touch panel consolidates operation information and settings for increased work efficiency and comfort. The touch panel is pressure-sensitive to handle gloved operation.



#### Seat Adjustment

Multiple seat adjustment positions for ease of operation.

Armrest adjustment button



#### **Adjustment of Control Lever Stand**

- The control lever stand has a 3-stage adjustment feature.
- Before you enter or exit the cab, or when you complete the crane operation, set the control lever stand on the left to the stowing position.
- The unlock lever is used by pulling to adjust for all positions of the control lever stand.



The control levers are smooth and responsive to the operators touch.



#### **Multi-Function Display Operation Switch**

73

Convenient hand controls are also available for when operating

the touchscreen is difficult (for instance when the seat is sliding back).



#### Safety Control for Boom Raising Operation

Prevent overload using boom raising operation for lifting a load off the ground. \*Release switch available for emergency operation



#### Visibility

The shape and height of the instrument panel as well as the angle of the windshield have all been designed for optimum forward visibility.



New cab



Jib

Extra reach is provided by a 2-staged bi-fold lattice type hydraulic offset jib that stows alongside the base boom section and features self-stowing jib mounting pins.

When erected, the jib can be offset  $5^{\circ}$  -  $40^{\circ}$  from the main boom center line, thus increasing operating range.

#### Hydraulic Offset Jib (5°-40°)





#### Assist Cylinder for Jib

40

When mounting and stowing the jib, the assist hydraulic cylinders are used resulting in increased work efficiency and safety.

33.8 ft / 59.1 ft

(10.3 m / 18.0 m)



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Longest Boom and Improved Capacity 40.0 ft – 183.7 ft (12.2 m – 56.0 m)

## **Single Telescopic Cylinder Boom**

For extension and retraction of sections, the 6-section, box type construction consists of 1 base section and 5 telescopic sections and are extended by a single telescoping cylinder.

All sections are fully extended/retracted automatically and locked in the selected working position.

#### **Outline of Telescoping Mode**

The boom telescope of this crane is performed with one telescoping cylinder. Each telescopic section is extended and fixed with pins in sequence from the top with several telescoping modes based on the designated job plan.



#### **Telescoping Status Display**

A single cylinder and each section of the boom's actual condition are displayed on the AML-E by activating the telescoping monitor switch.



Telescoping status indicator



Telescoping status screen

81.5

## Asymmetric Outrigger Extension Width Control

When operating the crane with the asymmetric outriggers extended, the AML-E detects the extension width of all of the crane's outriggers (front, rear, left and right) to measure maximum work capacity in each area. When slewing the boom from the longer outrigger area to the shorter outrigger area, the AML-E detects the motion and displays the maximum capacity according to the extension

width of each of the outriggers, and brings the motion to a slow stop before it reaches the maximum capacity. The AML-E's slow stop function will help to minimize any safety risks even in the cases of operator error.



A: Over-front B: Over-rear C: Over-side D: Over-side E: Rated Load [ O/R max. ] F: Rated Load [ O/R mid. ] G: Rated Load [ O/R mid. ] H: Rated Load [ O/R min. ]



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## **Smart Chart System**

The newly-developed Smart Chart expands the working area, allowing you to get the best crane performance in any outrigger extension setup.

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#### Under maximum outrigger extension setups

The Smart Chart taps the potential of a crane by expanding the conventional circular working area into a square one, improving work safety and efficiency.

## Carrier

The GR-1300XL-4 has a compact width/height 2-axle carrier which offers improved maneuverability and reduced footprint for ease of transportation.

TADANO



#### **Smooth Transmission**

- Electronically controlled, fully automatic transmission.
- Torque converter with full powershift driving axle selector.
- 5 forward and 2 reverse speeds, constant mesh.

2 speeds - High range - 2 wheel drive; 4 wheel drive 3 speeds - Low range - 4 wheel drive



Photo: optional model



#### **High-Performance Engine**

Cummins B6.7 4 cycle, turbo charged and after cooled

Max. output: Gross 280 HP (209 kW) at 2,200 min<sup>-1</sup> {rpm} Max. torque: 850 ft-lb (1,152 Nm) at 1,500 min<sup>-1</sup> {rpm}

#### **New Carrier Frame**

The new carrier frame design is developed and built so that its light weight is compatible with its high rigidity to achieve an advanced level of performance and highly-stabilized maneuverability for the new model of crane. \*Compared with our conventional crane models

9 GR-1300XL-4



## **TADANO View System**

Supports safety confirmation through an above-the-vehicle image shown on the large multi-function display. \*Camera range is limited. Do not rely only on the image. Confirm safety around the vehicle directly before driving.

Right front view monitor\*







Rear view camera

Rear view monitor\*



\*The camera images in the photos are simulated.



Photo: optional mode Front: Full floating type, steering and driving axle with

planetary reduction. Rear: Full floating type, steering and driving axle with planetary reduction and non-spin rear differential.

#### Axle

- Front: Full floating type, steering and driving axle with planetary reduction.
- Rear: Full floating type, steering and driving axle with planetary reduction.

#### **Four Steering Modes**

Hydraulic power steering controlled by steering wheel.



2 Wheel Front

#### Improved Accessibility to Cab





New Designed Step \*Left side

2 Wheel Rear

#### **Clearance Sonar**

Detects obstacles right behind the vehicle, and warns you with a flashing icon on the indicator and buzzer sound.

\*Detection distance: approx. 1 ft - 8.5 ft (0.3 m - 2.6 m)



Clearance sonar monitor



Clearance sonar



4 Wheel Coordinated



4 Wheel Crab





12 V power outlet



USB port

Air conditioner control panel

Large multi-function display



Transmission shiftswitch



Cup holder

### **Efficient Transportability**

2 axle carrier - light weight and compact size 28'10" carrier - including outrigger boxes (no more disassembly)

#### **Most Efficient Transport with 2 Trailers**

COUNTERWEIGHT: 43,500 lbs (19,800 kg) GVW: 114,600 lbs (51,950 kg)





#### **Mounting and Dismounting Systems**



#### Self-Removable Counterweight

Counterweight is hydraulically mounted and dismounted; in addition, dismounted counterweights can be lifted and moved for transport, and then remounted for operation at a work site without a helper crane.



Counterweight mounting/dismounting remote controller

Counterweight mounting/dismounting cylinder





### **Reduced Fuel Consumption**

### **Fuel Monitoring**

Fuel consumption monitoring allows an operator to minimize fuel waste from unnecessary acceleration and idling.





Preset menu display (during crane operation)

#### **Positive Control System**

Effectively controls the quantity of hydraulic pump discharge during crane operation in response to the amount of movement applied, and reduces CO<sub>2</sub> consumption.



Fuel consumption history display (during crane operation)



Fuel consumption history display (during traveling)

### 🚝 Eco Mode System

Controls the maximum engine speed at the time of crane operation and enables fuel consumption and  $CO_2$  emission to decrease by Max. 28% with Eco mode 1, and Max. 37% with Eco mode 2, and noise level is reduced.

#### Automatic Pump Disconnect

When the automatic pump disconnect switch is set to ON and the crane is not in use for a duration of time, the crane's hydraulic pump automatically shuts off, helping to reduce fuel consumption. Three settings are available for the duration of the crane operation standby before the pump shuts off: MIN, MID and MAX.

MIN: 1 minute

MID: 3 minutes

MAX: 5 minutes

# CO<sub>2</sub> emissions

**Fuel consumption** 

## **HELLO-NET**

HELLO-NET is a tool that connects the crane operations with owners, their service staff and the manufacturer through satellite. This high quality telematic tool collects data of the crane including working history, maintenance data and machine location. HELLO-NET can be accessed by the manufacturer to assist with downtime and to help improve Tadano support services.



## **HELLO-DATA LINK**

#### **Smartphone App**

HELLO-DATA LINK connects cranes to mobile devices by wireless LAN, allowing you to receive operating status, indications, error codes and other information in real-time from outside the cab.

HELLO-DATA LINK helps crane and site supervisors to monitor operating status and stay informed on repairs and maintenance.



#### **Four Working Displays**

Display information from connected machines via handy smartphone or tablet.

Swipe to easily change screens.





### **Standard Equipment**



Front Steps



**Right Side Steps** 



Rear Steps





Battery Disconnect Switch



Work Light



**DEF** Tank



Data Logger (ISU) **USB** Connection Port



Aviation Obstruction and Anemometer

#### MODEL: GR-1300XL-4

#### SPECIFICATIONS

MAXIMUM CAPACITY	260,000 lbs at 8 ft (130 US ton at 2.4 m)
PERFORMANCE	
Max. traveling speed	12 mph (19 km/h)
Gradeability (tan A)	57% (at stall)
	* Machine should be operated within the limit of engine
	crankcase design (30°: Cummins B6.7)
WEIGHT	
Gross vehicle mass	158,100 lbs (71,700 kg)
-1st axle	79.100 lbs (35.860 kg)
-2nd axle	79.000 lbs (35.840 kg)
MIN. TURNING RADIUS	2-wheel steer: 44' (13.4 m)
	4-wheel steer: 24' 7" (7.5 m)
	(at center of extreme outer tire)
BOOM	6-section extended by single telescoping cylinder.
Fully retracted length	40.0' (12.2 m)
Fully extended length	183.7 (56.0 m)
Extension speed	143.7' in 410 s
Angle	-1.5°-81.5°
Elevation speed	20° to 60° in 28 s
JIB	2 stage bi-fold lattice iib with hydraulic offset.
	Single sheave at the head of both iib sections.
Hvdraulic offset	5°–40°
Length	33.8', 59.1' (10.3 m, 18.0 m)
MAIN WINCH	Variable speed type with grooved drum driven by
-	hydraulic axial piston motor.
Max, single line pull	15.900 lbs (7.200 kg)
Single line speed	446 fpm (136 m/min) (at 4th laver)
Wire rope	3/4" x 1.050' (19 mm x 320 m) (diameter x length)
AUXILIARY WINCH	Variable speed type with grooved drum driven by
	hydraulic axial piston motor.
Max, single line pull	15,900 lbs (7,200 kg)
Single line speed	446 fpm (136 m/min) (at 4th layer)
Wire rope	3/4" x 738' (19 mm x 225 m) (diameter x length)
SLEWING	
Slewing speed	1.3 min <sup>-1</sup> {rpm}
Tail slewing radius	15'1" (4,600 mm)
HYDRAULIC SYSTEM	Pumps 2 variable piston pumps for crane functions.
	Tandem gear pump for steering, slewing
	and other hydraulic systems.
	Control valvesMultiple valves actuated by pilot pressure
	with integral pressure relief valves.
	Reservoir 210 gal. (795 lit.) capacity. External sight level gauge.
	Filtration BETA10=10 return filter, full flow with bypass protection,
	located inside of hydraulic reservoir. Accessible for easy
	replacement.
	Oil cooler Air cooled fan type

TADANO Load	Following information is displayed:
Moment Indicator	<ul> <li>Control lever lockout function with audible and visual pre-warning</li> </ul>
(TADANO AML-E2)	Number of parts of line
· · · · ·	Boom position indicator
	Outrigger state indicator
	Slewing angle
	Boom angle / boom length / jib offset angle / jib length / load radius / rated
	lifting capacities / actual loads read out
	Potential lifting height
	Ratio of actual load moment to rated load moment indication
	Automatic Speed reduction and slow stop function on boom elevation and
	slewing
	Working condition register switch
	Load radius / boom angle / tip height / slewing range preset function
	External warning lamp
	Tare function
	Main Hydraulic oil pressure
	Fuel consumption monitor
	Main winch / auxiliary winch select
	Drum rotation indicator (audible and visible type) main and auxiliary winch
	On rubber indicator
OUTRIGGERS	Four hydraulic, beam and jack outriggers. Vertical jack cylinders
	equipped with integral holding valve. Each outrigger beam and
	jack is controlled independently from cab.
Extension widths	Max 25' 7" (7.8 m), Mid 18' 1/2" & 23' 11-3/8" (5.5 m & 7.3 m)
	Min 9' 6-3/16" (2.9 m),
	Float size (Diameter) 1' 10- 1/2" (0.57 m)
CARRIER	Rear engine, left-hand steering, driving axle 2-way
	selected type by manual switch.
	4 x 2 front drive, 4 x 4 front and rear drive.
ENGINE	Model Cummins B6.7
	Type 4-cycle, turbo charged and after cooled,
	direct injection diesel.
	Piston displacement 408 cu. In. (6.7 liters)
	Bore x stroke 4.212 in. x 4.882 in. (107 mm x 124 mm)
	Max. output Gross 280 HP (209 kW) at 2,200 min <sup>-1</sup> {rpm}
	Max. torque 850 ft-lb (1.152 Nm) at 1,500 min <sup>-1</sup> {rpm}
TRANSMISSION	Electronically controlled full automatic transmission.
STEERING	Hydraulic power steering controlled by steering wheel.
	Four steering modes available: 2-wheel front, 2-wheel rear,
	4-wheel coordinated and 4 wheel crab
SUSPENSION	Front: Rigid mounted to frame.
TIDEO	Rear : Prvot mounted with hydraulic lockout device.
TIRES	29.5H25 対対 (OH) Air pressure: 94 psi (650 kPa)
	or 29.5-25 38PH (OR) Air pressure: 87 psi (600 kPa)
FUEL IANK CAPACITY	/9.2 gal. (300 lit.)

#### WORKING RANGE



#### DIMENSION



Note: Specifications are subject to change.



#### TADANO AMERICA CORPORATION

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