GR-500EXL

GR-500EXS

Improved accessibility

Front steps

Rear steps

Left side steps

Right side steps

Steps on the superstructure

TADANO Lifting your dreams

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TADANO

ROUGH TERRAIN CRANE

GR-500EXL

51 METRIC TON CAPACITY

GR-500EXS

50 METRIC TON CAPACITY

The GR-500EXL/EXS: High Quality We Are Proud Of

Photo: GR-500EXL

Same great carrier, two flexible options!

Crane capacity:
51 ton at 2.5 m
(50 ton at 3.0 m)
5-section long boom:
11.1 m – 42.0 m
2-staged under slung jib:
8.0 m / 12.7 m

Crane capacity:
50 ton at 2.5 m
(47.4 ton at 3.0 m)
4-section long boom:
10.2 m – 33.0 m
2-staged under slung jib:
8.0 m / 12.7 m

Choose your model!

GR-500EXL GR-500EXS

Tadano has launched two new rough terrain cranes in order to meet customer requirements and the needs of a global market. Both models combine a compact carrier for better maneuverability and improved driving performance. You will also appreciate many enhancements to the GR-500EXL and the GR-500EXS, including improved accessibility, environmental friendliness and high maintainability.
Tadano is confident that these new solutions will prove to be a great fit for your next project.

Substantial safety function

Automatic moment limiter [AML-C]

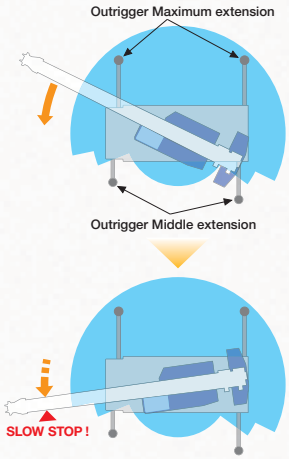
Tadano's AML-C is easy to use, innovative in design, displays important information to the operator and enables the operator to preset a custom working environment. For example, the AML-C shows the boom angle, boom length, load radius, operating pressure of the elevating cylinder, the extension width of the outriggers, slewing position, rated lifting capacity and present hook load. These features allow the AML-C to move seamlessly through all lifting operations without having to change configurations or input new codes to make the lift. The AML-C safety features provide both audible and visual warnings. When an operation approaches the load limit Tadano's slow stop function engages to avoid shock loads.

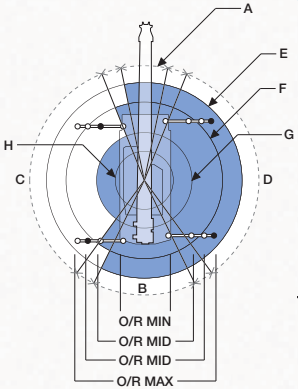
AML lamp

Outrigger asymmetric extension width control

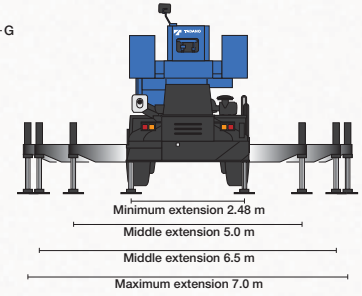
When operating the crane with the asymmetric outriggers extended, the AML-C detects the extension width of all of the crane's outriggers (front, rear, left and right) to measure maximum work capacity in each area. When slewing the boom from the longer outrigger area to the shorter outrigger area, the AML-C 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-C's slow stop function will help to minimize any safety risks even in the cases of operator error.

Photo: GR-500EXL



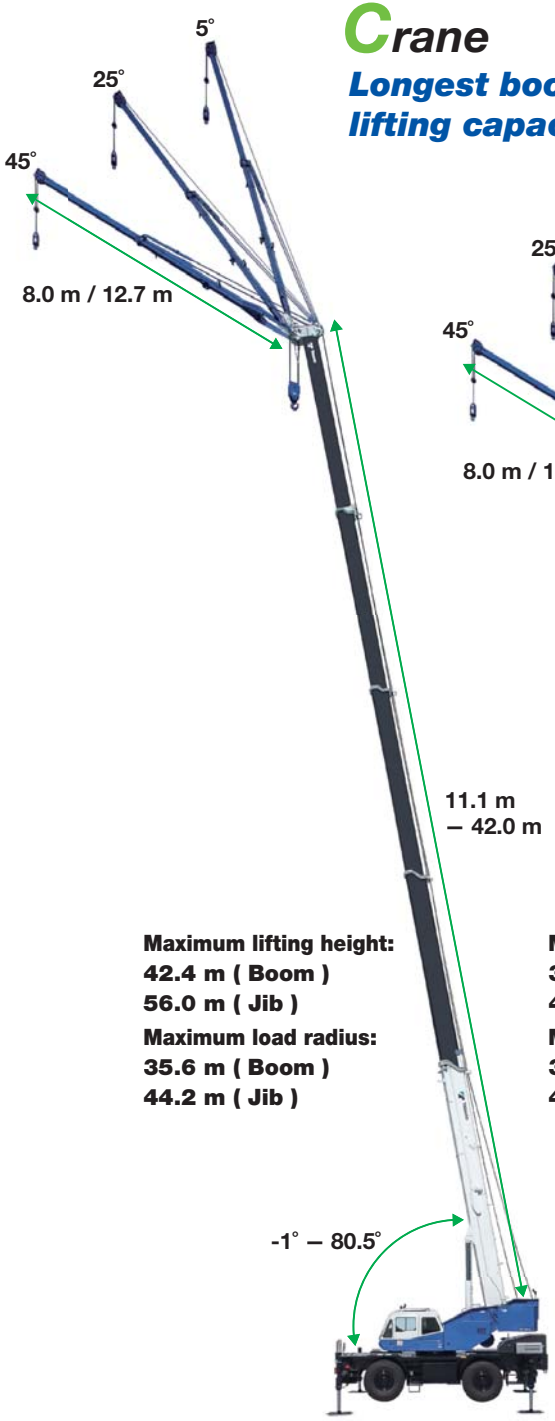


A: Over-front B: Over-rear C: Over-side D: Over-side
E: Rated Load [O/R max. 7.0 m]
F: Rated Load [O/R mid. 6.5 m]
G: Rated Load [O/R mid. 5.0 m]
H: Rated Load [O/R min. 2.48 m]



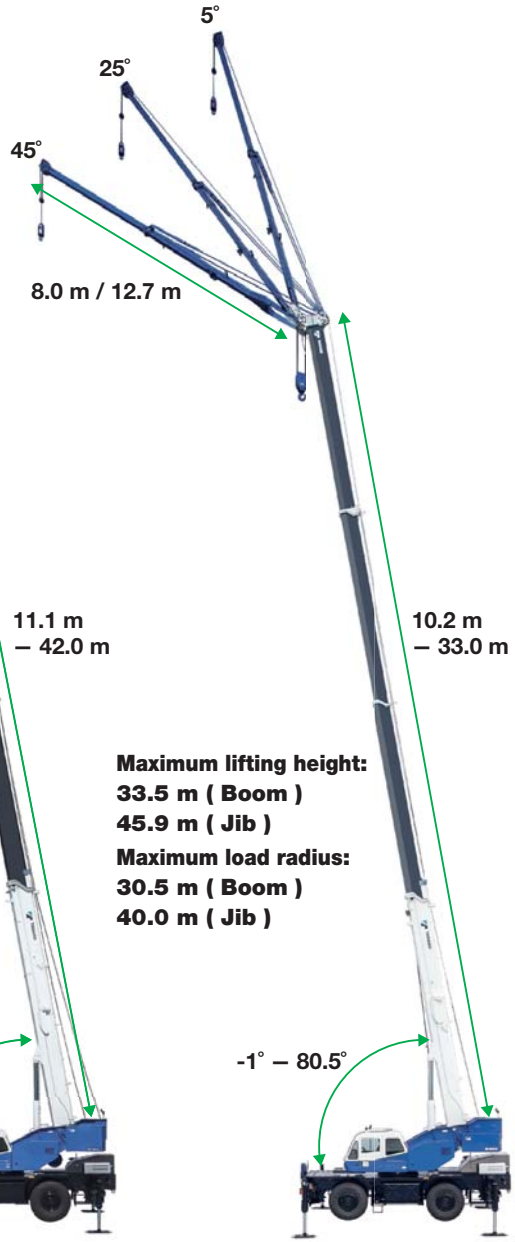
Crane

Longest boom & largest class lifting capacity in its class!



Maximum lifting height:
42.4 m (Boom)
56.0 m (Jib)
Maximum load radius:
35.6 m (Boom)
44.2 m (Jib)

GR-500EXL



Maximum lifting height:
33.5 m (Boom)
45.9 m (Jib)
Maximum load radius:
30.5 m (Boom)
40.0 m (Jib)

GR-500EXS

Photo: GR-500EXL

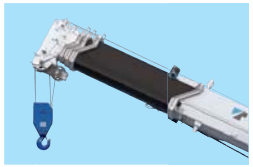
The round hexagonal box boom

Two telescoping modes Ⅰ & Ⅱ (GR-500EXL)

Operator capabilities are enhanced by two boom telescoping options for individual lift requirements.

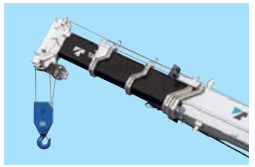
Mode Ⅰ

Mode I is the extension of the 2nd section only. This is followed by the synchronized extension of the 3rd, 4th, and 5th sections.



Mode Ⅱ

Mode II is the synchronized extensions of the 3rd, 4th and 5th sections. The 2nd section then extends independently.



Two winches with cable follower

The finger control levers are smooth and responsible to the operators touch.

Operator comfort

The crane cab provides improved livability and a more comfortable working environment.

Under slung jib (side up type)

A two-stage, under slung jib makes installation in narrow spaces possible.

Jib installation

Photo: GR-500EXL

Carrier

Newly designed carrier provides improved driving performance.

Photo: GR-500EXS

Good front and side view for driving

Double short elevating cylinders are installed at the rear side of cab to improve visibility while driving.

Radial tire (GR-500EXL: 505/95R25, GR-500EXS: 445/95R25)

Radial tires have been adopted to extend continuous travel time.

Radial tire

Continous travel without a break

Non-radial tire

30 minute drive → 120 minute break → 30 minute drive

Fast traveling speed

Max. traveling speed: 48 km/h (GR-500EXL)
44 km/h (GR-500EXS)

Locking Differential

A locking differential assists operators on rough roads.

Suspension

Front: Rigid mounted to the frame Rear : Semi-elliptic leaf springs

High performance engine

MITSUBISHI 6M60-TL
4 cycle, turbo charged and after cooled.
Max. output: 200 kW at 2600 min^{-1} {rpm}
Max. torque: 785 N-m at 1,400 min^{-1} {rpm}

New Design

Compact carrier for rough terrain crane

GR-500EXL

Overall length: approx. 13,390 mm
Overall width : approx. 2,960 mm
Overall height: approx. 3,860 mm

GR-500EXS

Overall length: approx. 12,500 mm
Overall width : approx. 2,960 mm
Overall height: approx. 3,810 mm

Boom head mirror

Boom head mirrors are used for checking the immediate area on each side of the vehicle in order to enhance driving safety.

Winch drum monitoring mirror

Folding mirror reduces height during transport.

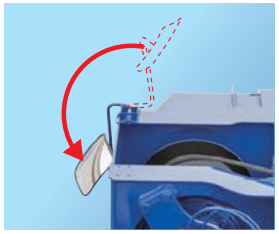
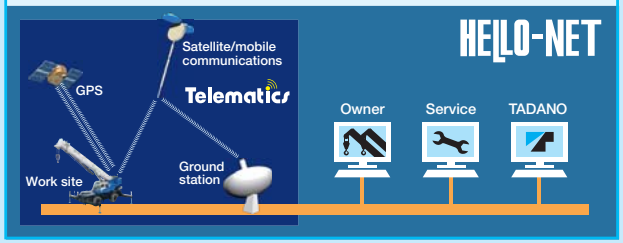


Photo: GR-500EXS

HELLO-NET System

The HELLO-NET System is used to monitor crane activity straight from your computer or mobile device.
You have the ability to view work history, machine position data and maintenance information.
HELLO-NET provides advanced customer support between the owners' site and TADANO Group.



Note: HELLO-NET availability varies by situation.
For detail, please contact your distributor or our sales staff in charge.

Environmentally Friendly Features

Eco Mode System

The Eco Mode System controls the maximum engine speed at the time of crane operation.
To prevent an unnecessary rise in engine speed when there is excessive acceleration, the system enables fuel consumption and CO_2 emissions to decrease by Max. 22 % with Eco mode Ⅰ, and Max. 30 % with Eco mode Ⅱ while simultaneously reducing noise levels.

Fuel Monitoring System

The Fuel Monitoring System constantly monitors fuel consumption on the AML screen. Checking this monitor enables you to prevent wasteful fuel consumption from unnecessary acceleration and idling.

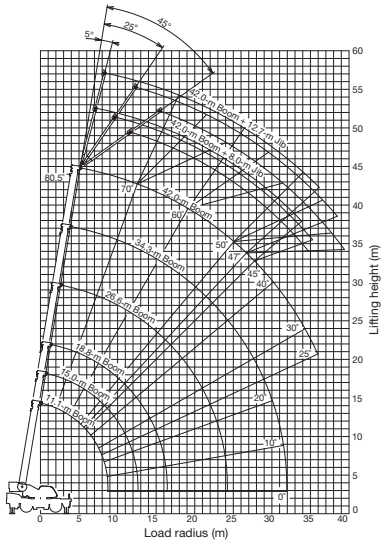
During crane operation

While traveling

WORKING RANGE & DIMENSIONS

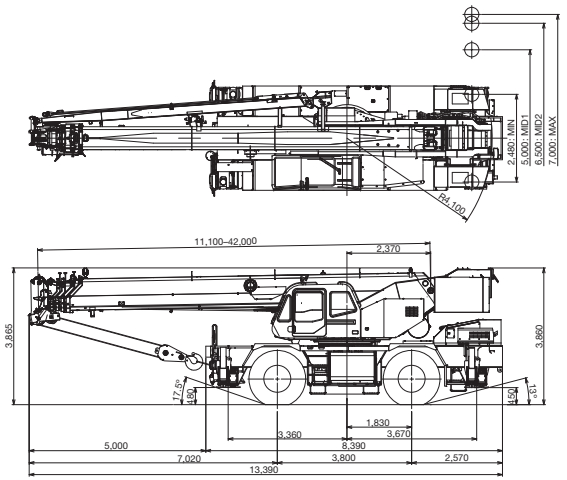
GR-500EXL

WORKING RANGE



DIMENSIONS

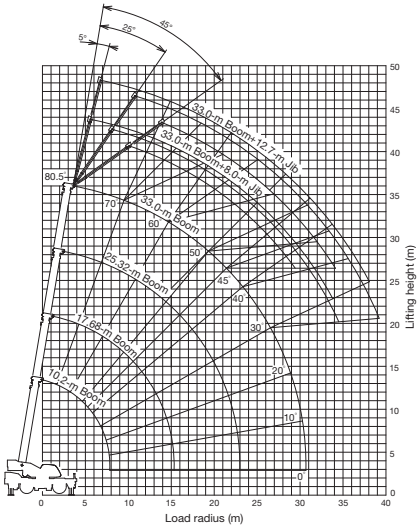
(mm)



Dimensions are with boom angle at -1° unless otherwise specified.

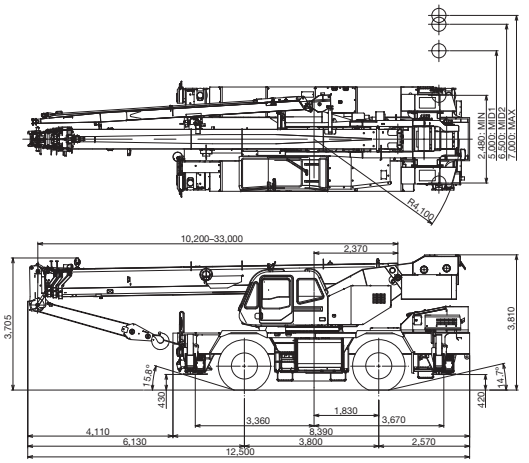
GR-500EXS

WORKING RANGE



DIMENSIONS

(mm)



Dimensions are with boom angle at -1°.

SPECIFICATIONS

	GR-500EXL	GR-500EXS
MAXIMUM CAPACITY	51,000 kg at 2.5 m (50,000 kg at 3.0 m)	50,000 kg at 2.5 m (47,400 kg at 3.0 m)
PERFORMANCE		
Max. traveling speed	48 km/h	44 km/h
Gradeability (tan θ)	65% (at stall), 30%*	92% (at stall), 30%*
	* Machine should be operated within limit of engine crackcase design. (17°: Mitsubishi 6M60-TL)	* Machine should be operated within limit of engine crackcase design. (17°: Mitsubishi 6M60-TL)
WEIGHT		
Gross vehicle mass	38,480 kg (incl. 51 ton hook block)	33,540 kg (incl. 50 ton hook block)
-front axle	18,910 kg	15,550 kg
-rear axle	19,570 kg	17,990 kg
MIN. TURNING RADIUS	10.3 m (2-wheel steering), 6.0 m (4-wheel steering) (at center of extreme outer tire)	
BOOM	5-section full power synchronized telescoping boom.	4-section full power synchronized telescoping boom.
Fully retracted length	11.1 m	10.2 m
Fully extended length	42.0 m	33.0 m
Extension speed	30.9 m in 150 s	22.8 m in 88 s
Angle	-1°–80.5°	-1°–80.5°
Elevation speed	20° to 60° in 30 s	20° to 60° in 30 s
JIB	2-staged jib with triple offset (tilt type). Single sheave at jib head.	
Offset	5°, 25°, 45°	
Length	8.0 m and 12.7 m	
MAIN WINCH	Variable speed type with grooved drum driven by hydraulic axial piston motor through speed reducer.	Variable speed type with grooved drum driven by hydraulic axial piston motor through speed reducer.
Single line pull	44.1 kN (4,500 kgf)	44.1 kN (4,500 kgf)
Single line speed	132 m/min. (at 4th layer)	132 m/min. (at 4th layer)
Wire rope	16 mm x 225 m (Diameter x length)	16 mm x 182 m (Diameter x length)
AUXILIARY WINCH	Variable speed type with grooved drum driven by hydraulic axial piston motor through speed reducer.	Variable speed type with grooved drum driven by hydraulic axial piston motor through speed reducer.
Single line pull	44.1 kN (4,500 kgf)	44.1 kN (4,500 kgf)
Single line speed	124 m/min. (at 3rd layer)	124 m/min. (at 3rd layer)
Wire rope	16 mm x 117 m (Diameter x length)	16 mm x 100 m (Diameter x length)
SLEWING		
Slewing speed	2.1 min^{-1} {rpm}	2.7 min^{-1} {rpm}
Tail slewing radius	4,100 mm	4,100 mm
HYDRAULIC SYSTEM	Pumps... 2 variable piston pumps for crane functions. Tandem gear pump for steering, slewing and optional equipment. Control valves... Multiple valves actuated by pilot pressure with integral pressure relief valves. Reservoir... 690 liters capacity. External sight level gauge. Oil Cooler... Air cooled fan type.	
TADANO Automatic Moment Limiter (Model: AML-C)	Following information is displayed. • Control lever lockout function with audible and visual pre-warning • 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 • Permissible load • Automatic speed reduction and slow stop function for 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 / auxiliarly winch select • Drum rotation indicator (audible and visible type) main and auxiliary winch • On-rubber indicator	
OUTRIGGERS	4 hydraulic, beam and jack outriggers. Vertical jack cylinders equipped with integral holding valve. Each outrigger beam and jack is controlled independently from cab.	
Extension width	Max. ... 7,000 mm, Mid. ... 6,500 mm & 5,000 mm Min. ... 2,480 mm, Float size (Diameter)... 400 mm	
CARRIER	Rear engine, left-hand drive, driving axle 2-way selected type by manual switch. 4 x 2 front drive, 4 x 4 front and rear drive	
ENGINE	Model... Mitsubishi 6M60-TL Type... 4-cycle, turbo charged and after cooled. Piston displacement... 7.54 liters Bore x stroke...118 mm x 115 mm Max. output... 200 kW at 2,600 min^{-1} {rpm} Max. torque... 785 N-m at 1,400 min^{-1} {rpm}	
TRANSMISSION	Electronically controlled full automatic transmission.	
STEERING	Hydraulic power steering. 3 steering modes available: 2-wheel front, 4-wheel coordinated, 4-wheel crab	
SUSPENSION	Front..... Rigid mounted to frame. Rear..... Semi-elliptic leaf springs.	
TIRES	Front..... 505/95R25, Single x 2 Rear..... 505/95R25, Single x 2	Front..... 445/95R25, Single x 2 Rear..... 445/95R25, Single x 2
FUEL TANK CAPACITY	300 liters	

Note: Some specifications are subject to change.