GR-800EX

GR-600EX

GR-500EX

GR-300EX

TADANO

Lifting your dreams

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GR-800EX/600EX/500EX/300EX-2-E-13-11-03-43-482-B4
Printed in Japan

TADANO

ROUGH TERRAIN CRANES

GR-800EX GR-600EX

80 METRIC TON CAPACITY | 60 METRIC TON CAPACITY

GR-500EX GR-300EX

50 METRIC TON CAPACITY | 30 METRIC TON CAPACITY

ROUGH TERRAIN CRANE

The GR-EX Models:
High Quality We Are Proud Of

CONTENTS

GR-300EX

Crane capacity: 30,000 kg at 3.0 m
4-section long boom: 9.7 m - 31.0 m
2-staged bi-fold jib: 7.2 / 12.8 m

GR-500EX

Crane capacity: 50,000 kg at 2.5 m
4-section long boom: 10.7 m - 34.7 m
2-staged bi-fold jib: 8.8 / 15.2 m

GR-600EX

Crane capacity: 60,000 kg at 3.0 m
5-section long boom: 11.0 m - 43.0 m
2-staged bi-fold jib: 10.1 / 17.7 m

GR-800EX

Crane capacity: 80,000 kg at 3.0 m
5-section long boom: 12.0 m - 47.0 m
2-staged bi-fold jib: 10.1 / 17.7 m

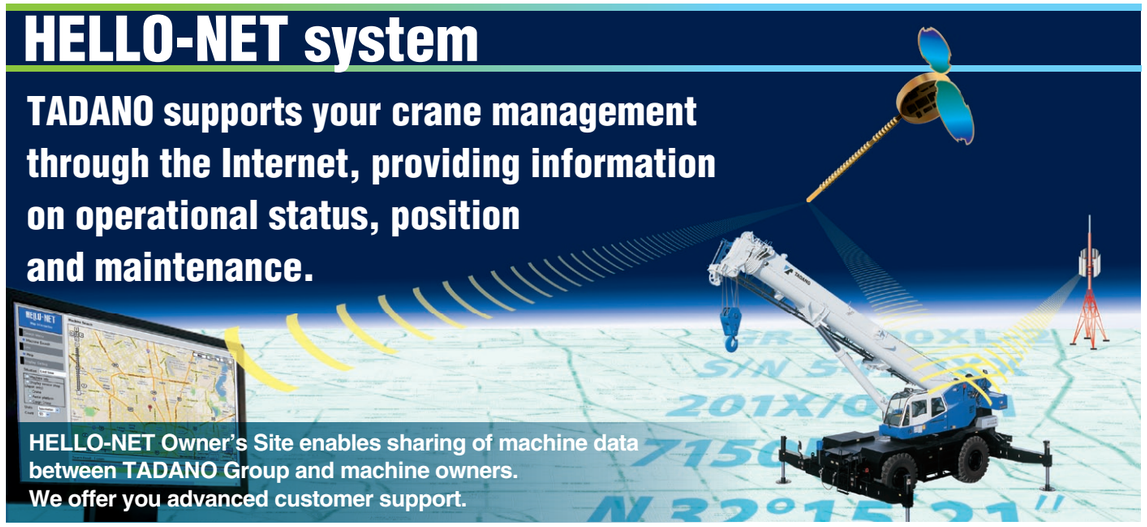
New Generation of Cranes!

Our cranes can help you explore your future. At TADANO we are concerned about our environment.
Improving our cranes operations and specifications to meet this goal is important to us.
However user friendliness, operator comfort, safety and customer support are also part of our essential goals.
To this end TADANO has launched a new generation of crane that is friendly to the environment, our earth and our future.

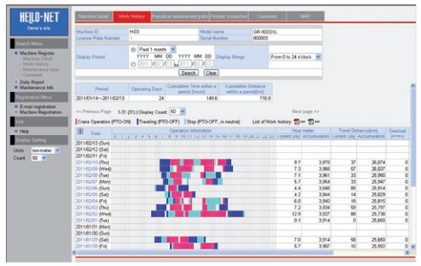
Plenty of new functions incorporated!

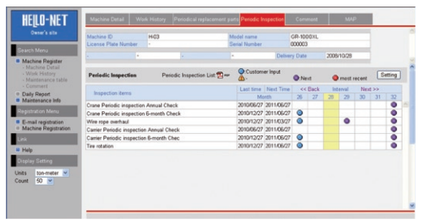
HELLO-NET system

TADANO supports your crane management through the Internet, providing information on operational status, position and maintenance.



HELLO-NET Owner's Site enables sharing of machine data between TADANO Group and machine owners.
We offer you advanced customer support.





Monitoring machine information from your computer

1. Work History

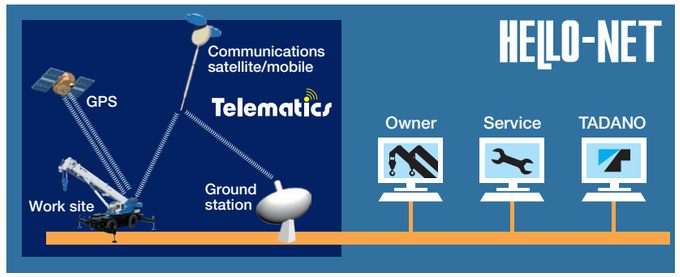
HELLO-NET Owner's Site displays the day-to-day operational status, mileage and remaining fuel for each machine equipped with a communication terminal. In addition, you can view a list displaying the number of hours of operation and the mileage of all your machines for any specified month.

2. Machine Position Data

Using HELLO-NET Owner's Site, you can check a machine's latest position (up until the previous day) on a map. Two types of position data, listed below, are transmitted automatically from your machine once every day. Work Site: The location where the machine's PTO has been activated (for one hour or more). Position at Day's End: The final location from which GPS was able to receive data on a given day.

3. Maintenance Information

You can check the maintenance timetable of your machines for periodical replacement parts and inspection schedule.
HELLO-NET supports the maintenance of your machine.



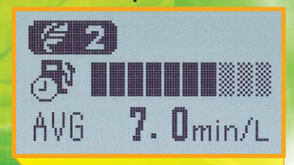
Telematics (machine data logging and monitoring system) with HELLO-NET via internet (*availability depends on countries).

DETAILS: The availability of data communication systems, such as satellite or mobile communications which serve to widen the service area differs according to individual countries. Besides, there are some countries where the system itself is not in use yet. For details, please contact your distributor or our sales staff in charge.

The Environmentally Conscious Crane

Our rough terrain cranes are designed to minimize environmental impact.

Fuel consumption indicator



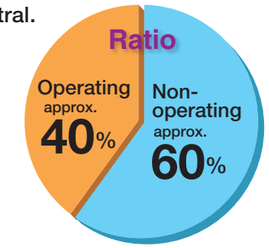
Our rough terrain cranes offer
"Fuel monitoring system," "Eco mode," "Positive control"
and more to substantially reduce fuel consumption and CO_2 emissions.
Promoting comfortable living environment and preserving the environment.

Introducing Fuel Monitoring System

To the AML screen which watches safe operation, we provided a monitoring function of fuel consumption to help promote environmental preservation, which constantly displays fuel consuming conditions on the AML screen during the period of crane operation, standby and traveling to help support work in an eco-friendly way. In addition, such data can be displayed as a fuel consumption history to serve to control crane operating conditions.
The systems thus serve to improve work efficiency and operation effectiveness in an environmentally-friendly way including a reduction of fuel consumption and CO_2 emissions as well as a lowered level of noise.

Two functional devices to reduce fuel consumption

TADANO aims to reduce fuel consumption by means of its newly developed technologies with due consideration given to the length of actual operating hours as well as a non-operating time (when the crane is in a state of standby) with the operating lever returned to neutral.
In this relation, the average ratio between the operating hours and the non-operating time has turned out to be approximately 40 % to 60 % according to the results of our investigation.
So, based on the above, TADANO made every effort to reduce fuel consumption for each case by means of the two differently functioning devices, and successfully achieved the objectives;



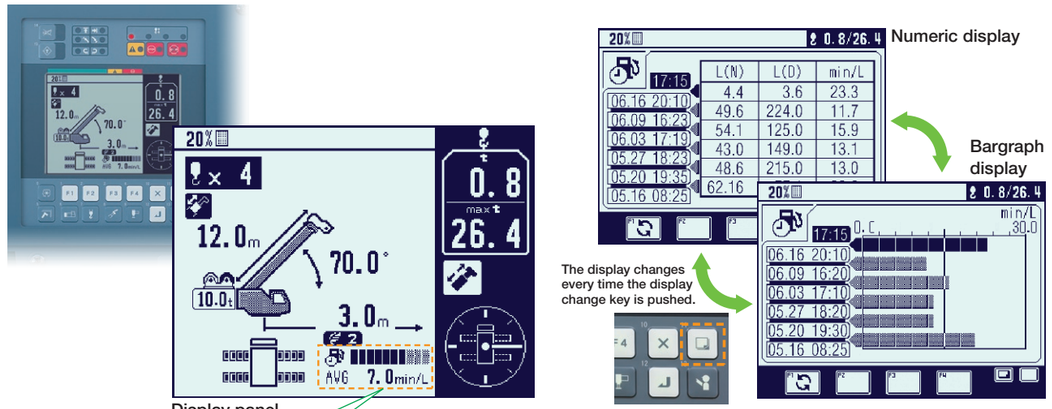
Eco mode system - Works to reduce fuel consumption while the crane is in operation.

Positive control system - Works to reduce fuel consumption when the crane is on standby.

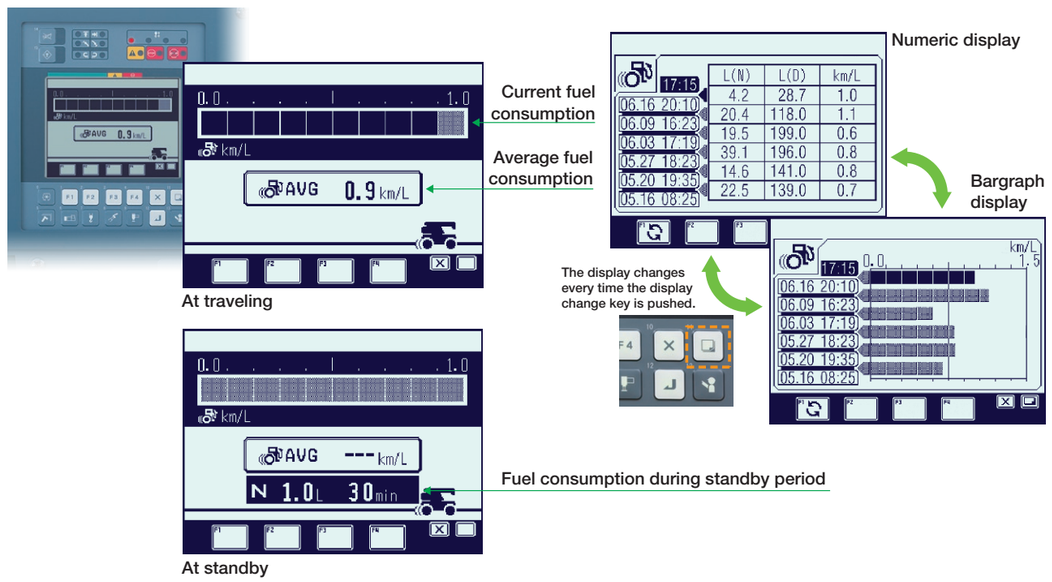
Fuel monitoring system

The system constantly monitors and displays on the AML screen information on fuel consuming conditions.
Checking the indicator enables you to prevent wasteful acceleration and wasteful standby.

Working

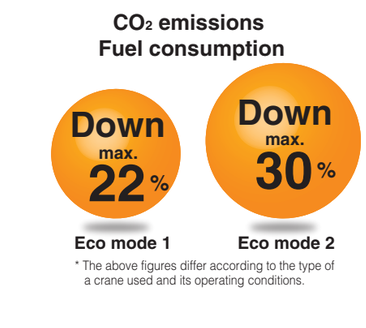


Driving

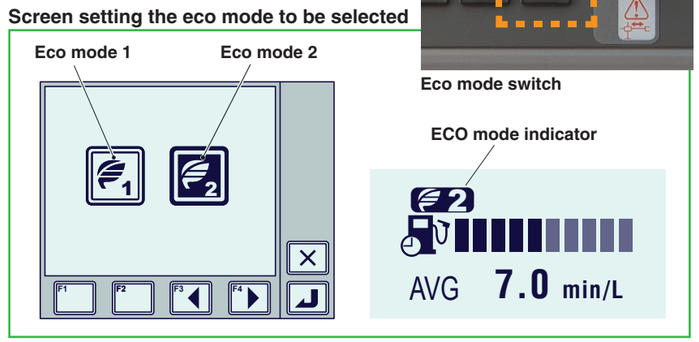


Eco mode system

The system controls the maximum engine speed during crane operation.
In addition, due to curbing an unnecessary rise in the engine speed that occurs when accelerated to excess, the system enables CO_2 emissions and fuel consumption to decrease by max. 22 % with the Eco mode 1 employed, and max. 30 % when the Eco mode 2 is applied. In addition, it realizes a low level of noise.

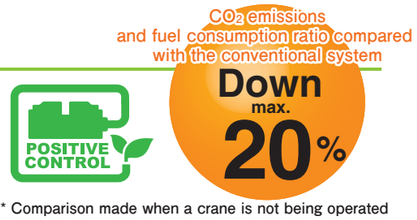


* The above figures differ according to the type of a crane used and its operating conditions.



Positive control system

The system effectively controls the quantity of hydraulic pump discharge at the time of crane operation in response to the amount of movement applied by the operating lever. Additionally, it keeps the quantity of hydraulic pump discharge to a minimum, reducing CO_2 emissions and fuel consumption by up to 20 %.

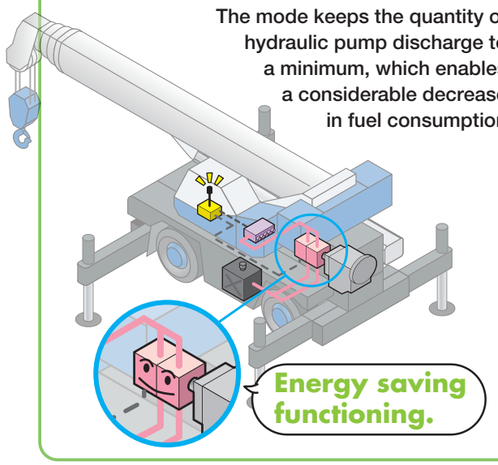


* Comparison made when a crane is not being operated

* The above figures differ according to the type of a crane used and its operating conditions.

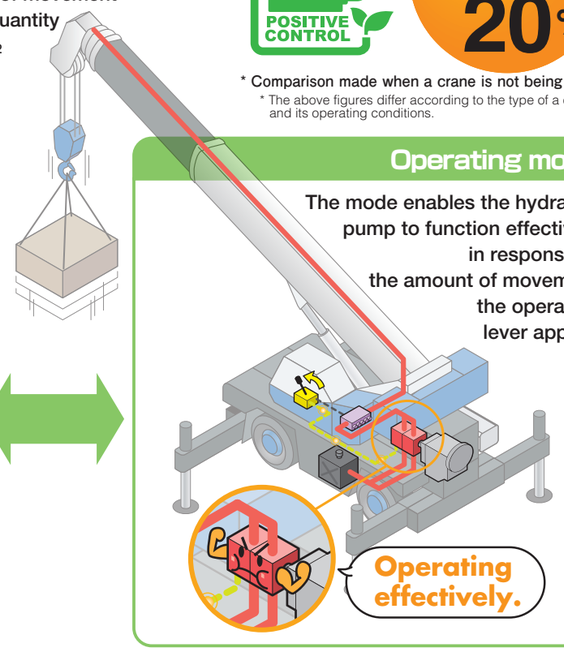
Non-operating mode

The mode keeps the quantity of hydraulic pump discharge to a minimum, which enables a considerable decrease in fuel consumption.



Operating mode

The mode enables the hydraulic pump to function effectively in response to the amount of movement the operating lever applies.



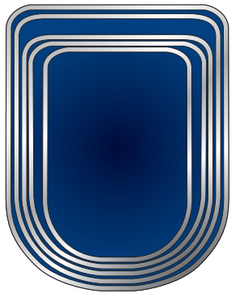
Crane

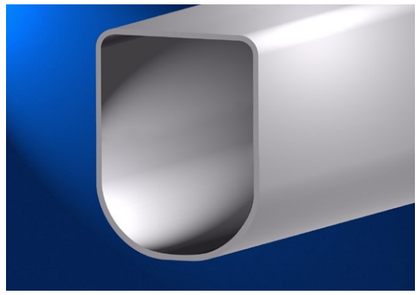
The rounded boom is made of high tensile steel, which allows for decreased boom weight as well as increased boom strength. In addition, the high-performance AML-C ensures safe operation.

New Design

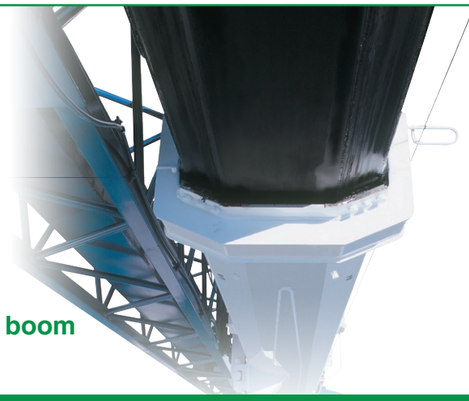
The Ultimate boom for the rough terrain crane (GR-800EX, GR-600EX, GR-500EX)

The rounded boom constructed of high tensile steel contributes to decreased boom weight and increased boom strength.





GR-300EX



The round hexagonal box boom

(GR-300EX)

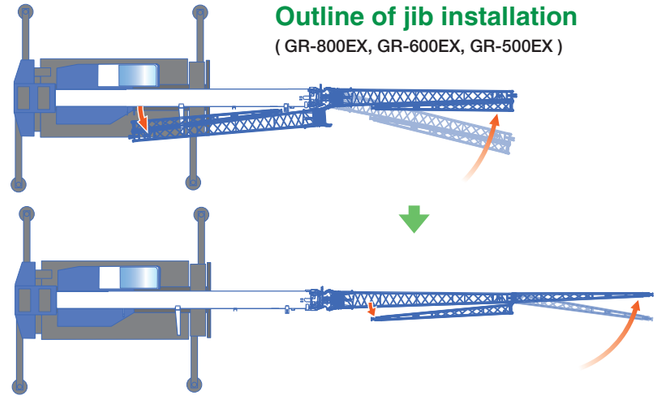
Assist cylinder for jib

(GR-800EX, GR-600EX, GR-500EX)

When mounting and stowing the jib, assistant hydraulic cylinders ensure effective operation, thus increasing the work efficiency of jib mounting and stowing.

Outline of jib installation

(GR-800EX, GR-600EX, GR-500EX)



Two winches with cable follower

Both the main winch and the auxiliary winch with powerful line pull operate at high speeds, thus serving to enhance work efficiency.

*Maximum permissible line pull may be affected by wire rope strength.

Photo: GR-600EX

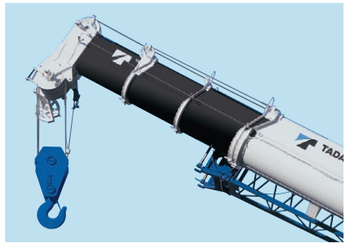
Two telescoping modes [Ⅰ] & [Ⅱ]

(GR-800EX, GR-600EX)

The operator can select either of the two boom telescoping modes based on the designated job plan.
Normal operation is performed with the Mode [Ⅰ]. However, when the stability of performance needs to be raised in particular, a boom telescoping system to have the boom weight lighter can be employed by means of the Mode [Ⅱ].

Mode [Ⅰ]

Mode [Ⅰ] is extension of 2nd section only. Then follows the synchronized extension of 3rd , 4th and 5th sections.



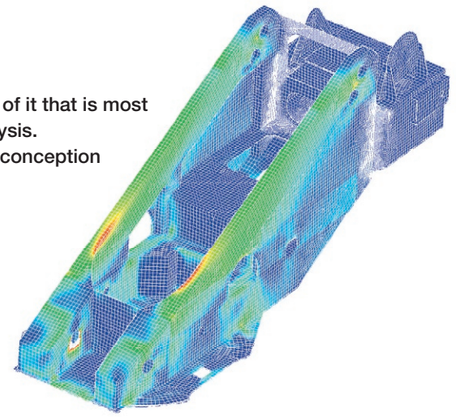
Mode [Ⅱ]

Mode [Ⅱ] is synchronized extension of 3rd , 4th and 5th sections. Then 2nd section extends independently.

New crane structure (GR-800EX, GR-600EX, GR-500EX)

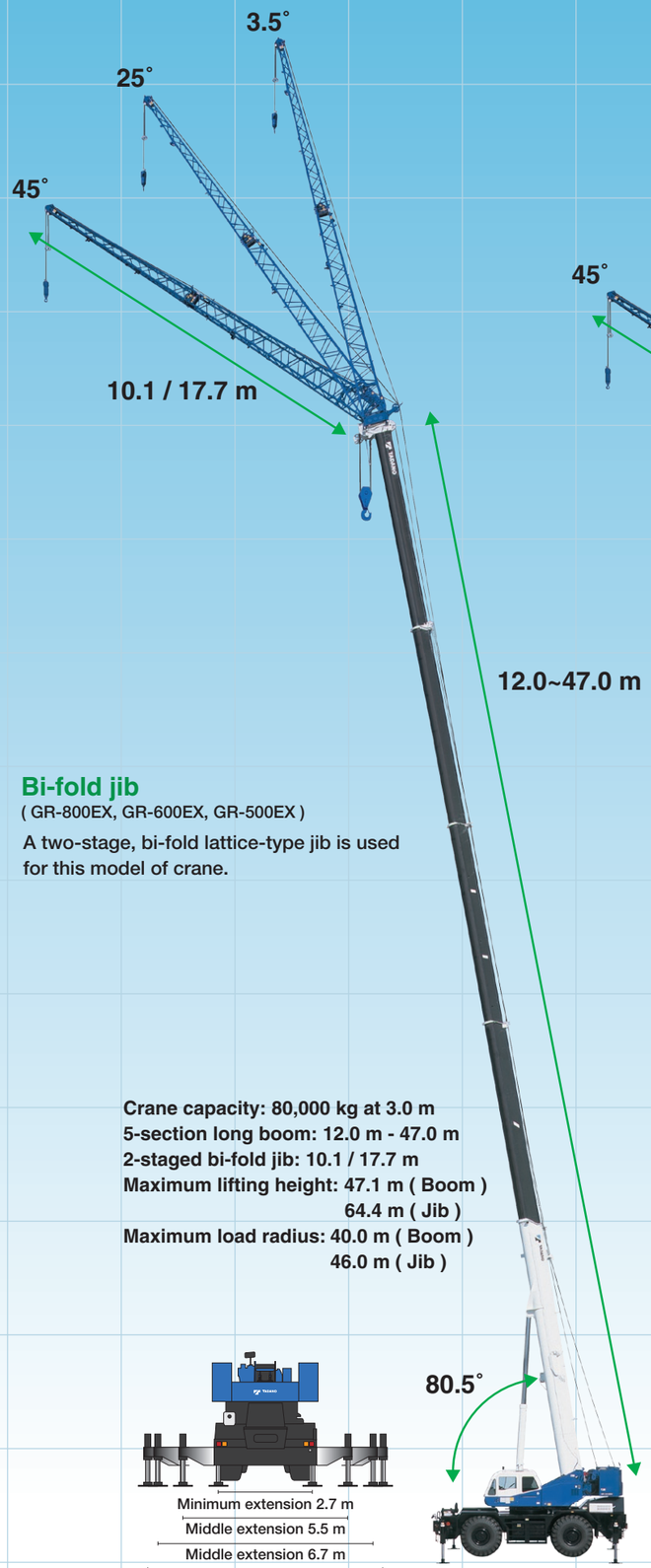
When developing the crane structure, we attached importance to the shape of it that is most suited for crane operation, and realized it by making full use of a *FEM analysis.
As for the slewing frame, we adopted a new structure of TADANO's original conception to secure its high rigidity as well as keeping the configuration in a compact style along with the overall height being retained at a desired level.

*FEM : Finite Element Method



Bi-fold jib
(GR-800EX, GR-600EX, GR-500EX)

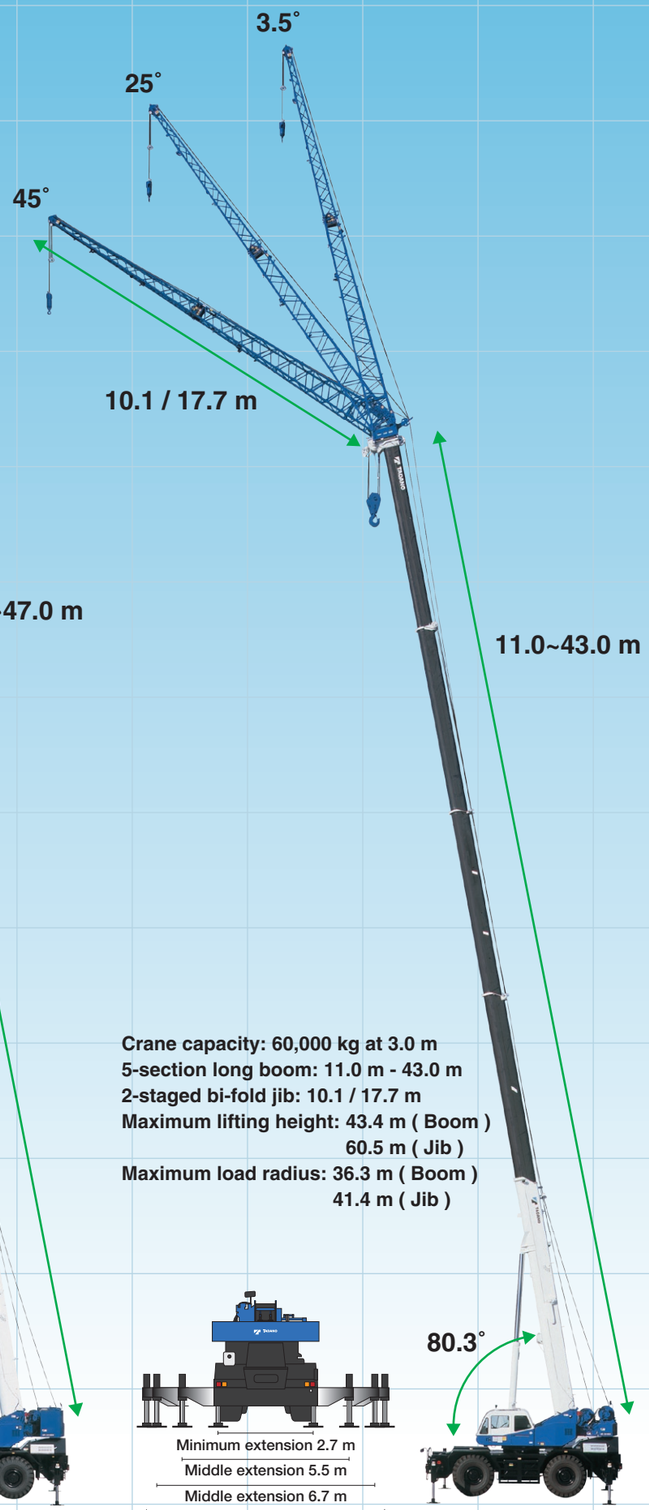
A two-stage, bi-fold lattice-type jib is used for this model of crane.



Crane capacity: 80,000 kg at 3.0 m
5-section long boom: 12.0 m - 47.0 m
2-staged bi-fold jib: 10.1 / 17.7 m
Maximum lifting height: 47.1 m (Boom)
64.4 m (Jib)
Maximum load radius: 40.0 m (Boom)
46.0 m (Jib)

Minimum extension 2.7 m
Middle extension 5.5 m
Middle extension 6.7 m
Maximum extension 7.3 m

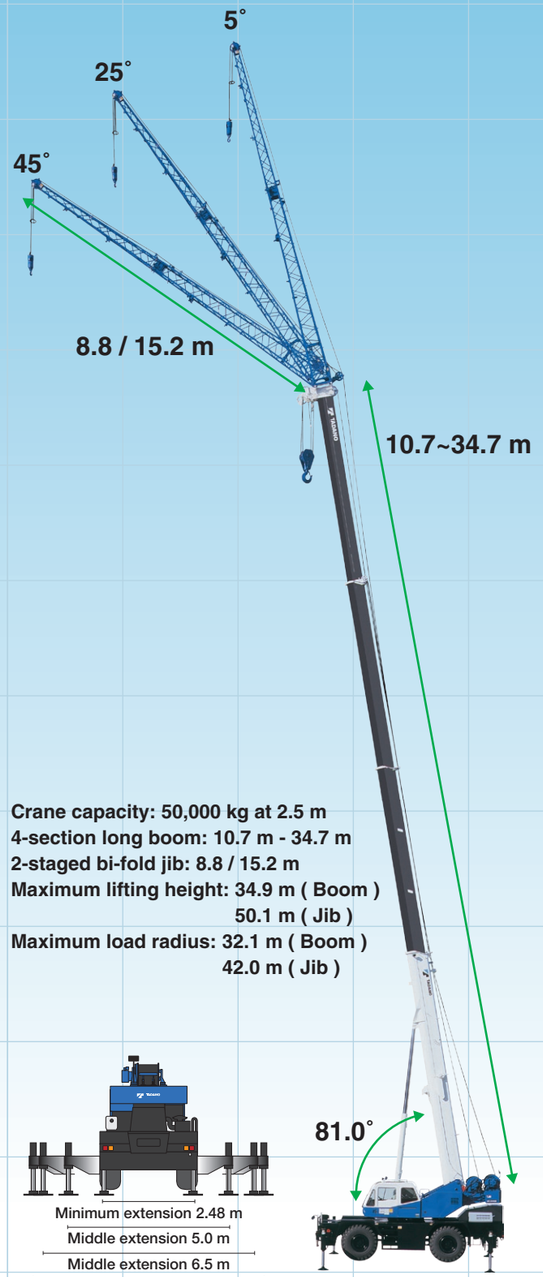
GR-800EX



Crane capacity: 60,000 kg at 3.0 m
5-section long boom: 11.0 m - 43.0 m
2-staged bi-fold jib: 10.1 / 17.7 m
Maximum lifting height: 43.4 m (Boom)
60.5 m (Jib)
Maximum load radius: 36.3 m (Boom)
41.4 m (Jib)

Minimum extension 2.7 m
Middle extension 5.5 m
Middle extension 6.7 m
Maximum extension 7.3 m

GR-600EX



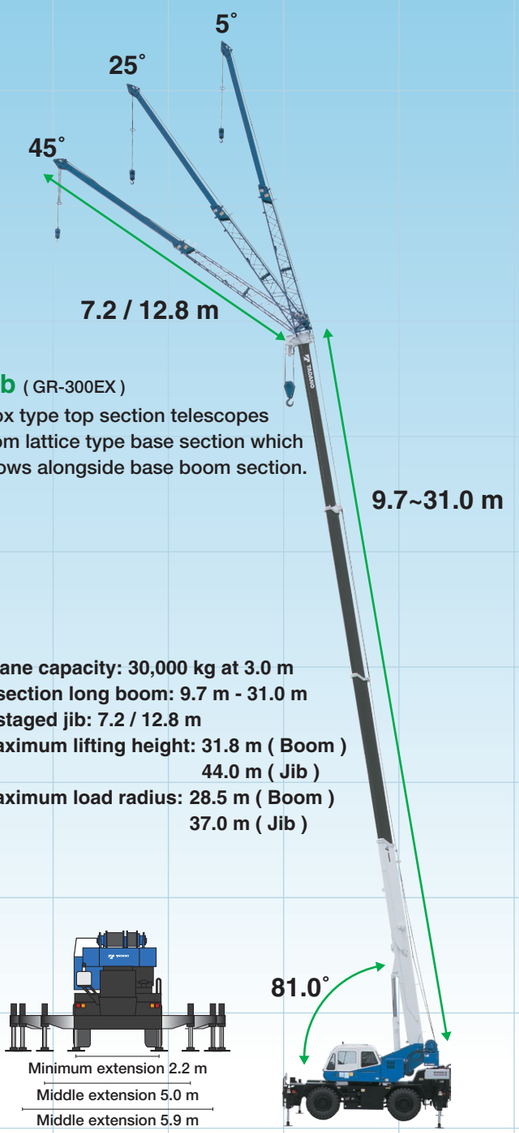
Crane capacity: 50,000 kg at 2.5 m
4-section long boom: 10.7 m - 34.7 m
2-staged bi-fold jib: 8.8 / 15.2 m
Maximum lifting height: 34.9 m (Boom)
50.1 m (Jib)
Maximum load radius: 32.1 m (Boom)
42.0 m (Jib)

Minimum extension 2.48 m
Middle extension 5.0 m
Middle extension 6.5 m
Maximum extension 7.0 m

GR-500EX

Jib (GR-300EX)

Box type top section telescopes from lattice type base section which stows alongside base boom section.



Crane capacity: 30,000 kg at 3.0 m
4-section long boom: 9.7 m - 31.0 m
2-staged jib: 7.2 / 12.8 m
Maximum lifting height: 31.8 m (Boom)
44.0 m (Jib)
Maximum load radius: 28.5 m (Boom)
37.0 m (Jib)

Minimum extension 2.2 m
Middle extension 5.0 m
Middle extension 5.9 m
Maximum extension 6.3 m

GR-300EX

Automatic moment limiter [AML-C]

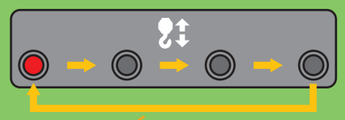
Tadano's new AML-C is easy to use. It allows the operator to simultaneously monitor: boom angle, boom length, elevating cylinder operating pressure, the extended length of the outriggers, slewing position, rated lifting capacity and present hook weight.
All of this enables the AML-C to move easily through lifting capacity changes without changing configurations and codes to make a lift.

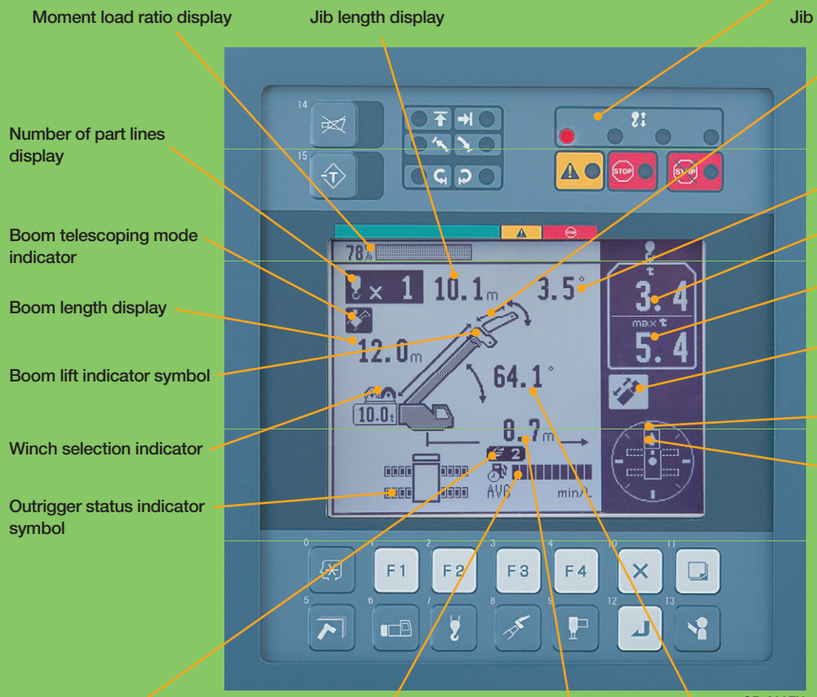
The AML-C provides both audio and visual warnings when a condition exists that will overload the crane and automatically employs our soft stop function to avoid shock loads.

The AML-C with "OPERATOR" pre-set working range limits and automatic soft stop functions will assist the operator to deliver safe smooth operations for years to come.

Drum Indicator

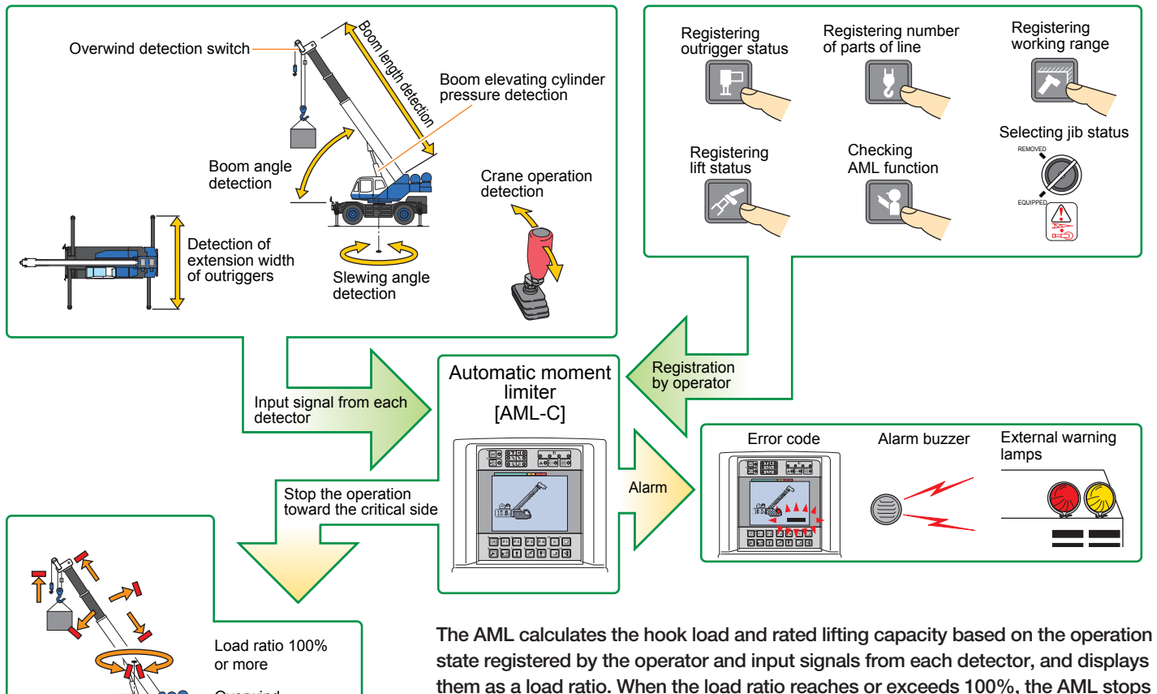
When the winch drum rotates, the four drum indicators flash sequentially, and show that the drum is rotating. The moving distance of the hook block per one flash of the indicator is approximately 20 cm to 30 cm.





GR-800EX

AML lamp

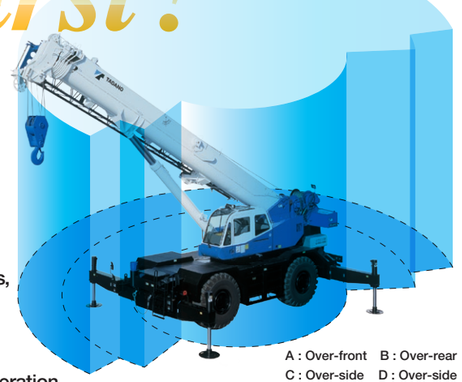


The AML calculates the hook load and rated lifting capacity based on the operation state registered by the operator and input signals from each detector, and displays them as a load ratio. When the load ratio reaches or exceeds 100%, the AML stops the crane operations toward the critical sides and warns with error codes and buzzer. (The AML is a safety device designed to prevent accidents such as a machine overturning and damage caused by overload.)

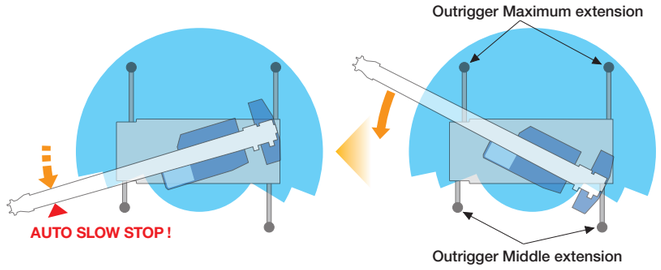
Safety First !

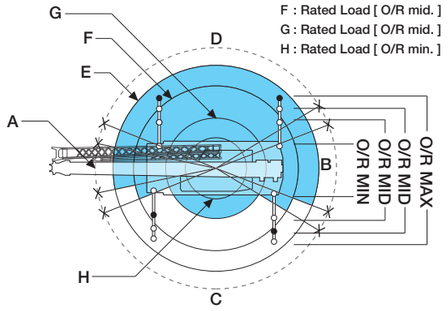
Control of asymmetric extension width of outriggers

When operating the crane with the asymmetric outriggers extended, the AML-C automatically detects the extension width of outriggers at the front and rear, and to the left and right of the crane to offer maximum work value through each area.
When slewing the boom from the longer outrigger area to the shorter outrigger area, the AML-C automatically detects the motion and displays the maximum capacity according to each the extension widths of the outriggers, and brings the motion to a slow stop before it reaches the limits of the allowed capacity.
Therefore, even if the operator operates the crane without being aware of a change in the capacity, the AML-C monitors it continuously to ensure safe operation.



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.]





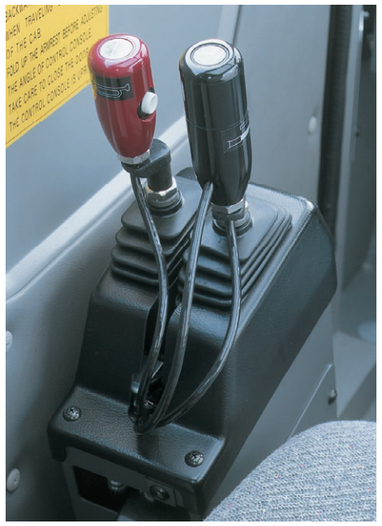
Operator Comfort

The crane cabin provides improved livability and offers the operator a more comfortable working environment.

Photo: GR-600EX

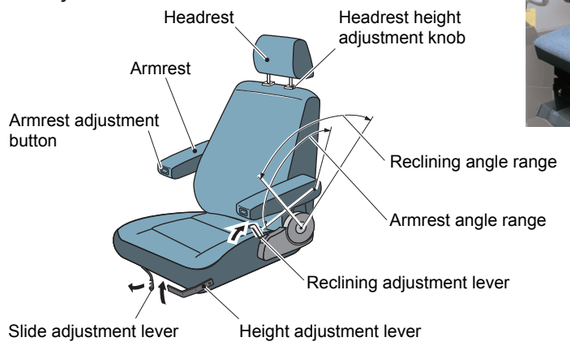
Air conditioner
Hot-water heater and air conditioning.

The crane operating levers are of finger control type and surely and steadily respond to the operator.



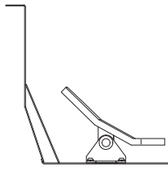
Seat Adjustment

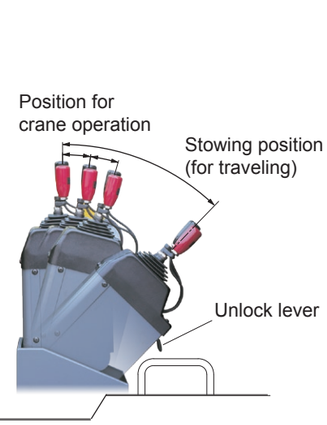
Adjust the seat to a position where you can press down far enough so that you can operate all the devices easily when you sit on the seat.



Adjustment of control lever stand

You can adjust the position of the control lever stand in 3 stages. Before entering or leaving the cab, or after completing operations, set the control lever on the left to the stowing position.
While pulling the unlock lever, adjust the position of the control lever stand.





Wider steps and hand rails

Front steps

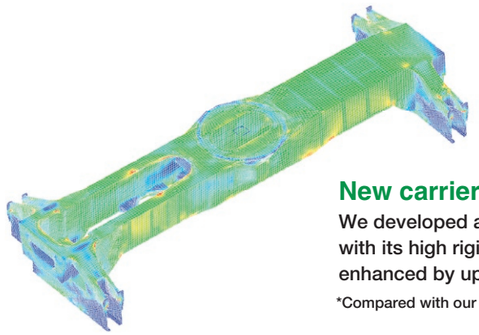
Rear steps

Left side steps

Right side steps

Carrier

Photo: GR-800EX



New carrier frame (GR-800EX, GR-600EX, GR-500EX)

We developed and built the carrier frame so that lightness in weight could be compatible with its high rigidity at an advanced level of performance. As a result, the rigidity was enhanced by up to *35 %, enabling highly stabilized maneuverability for the new models.

*Compared with our conventional crane models

High Performance Engine

MITSUBISHI 6M60-TL

GR-800EX, GR-600EX, GR-500EX

Model	MITSUBISHI 6M60-TL
Type	4 cycle, turbo charged and after cooled, 6 cylinder in line, direct injection, water cooled diesel engine.
Piston displacement	7,545 cm^3
Max. output	200 kW at 2,600 min^{-1} {rpm}
Max. torque	785 N-m at 1,400 min^{-1} {rpm}

*EURO SPEC

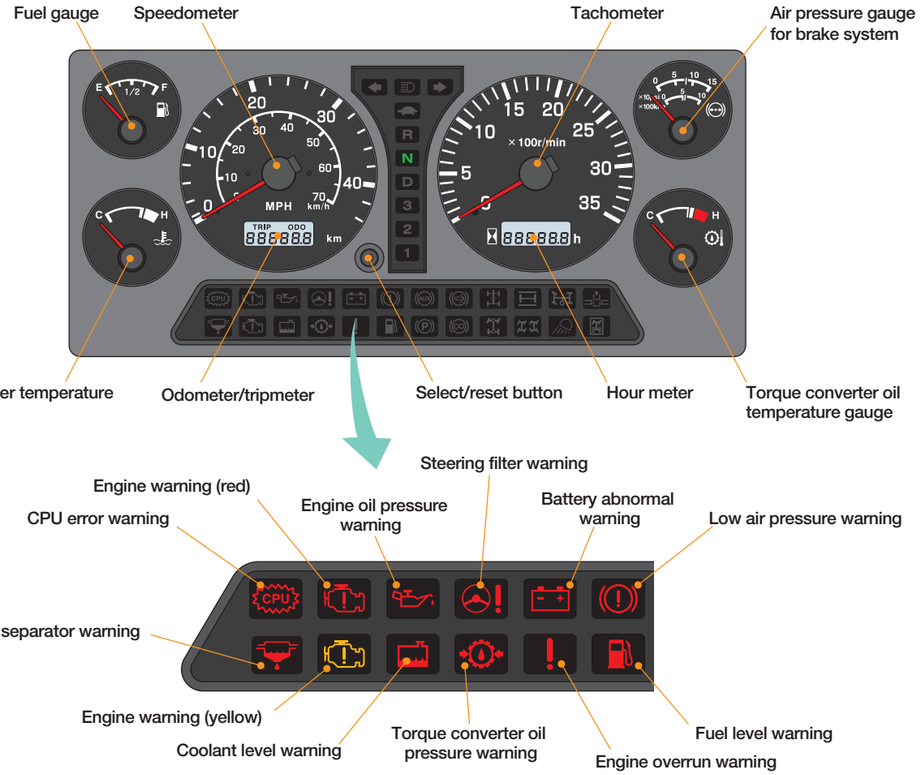
Model	Cummins QSB 6.7 [EUROMOT ⅢB]
Type	4 cycle, turbo charged and after cooled, 6 cylinder in line, direct injection, water cooled diesel engine.
Piston displacement	6,700 cm^3
Max. output	194 kW at 2,500 min^{-1} {rpm}
Max. torque	843 N-m at 1,600 min^{-1} {rpm}

GR-300EX

Model	Cummins QSB6.7 *EUROMOT ⅢB (*EURO SPEC)
Type	4 cycle, turbo charged and after cooled, 6 cylinder in line, direct injection, water cooled diesel engine.
Piston displacement	6,700 cm^3
Max. output	160 kW at 2,500 min^{-1} {rpm}
Max. torque	843 N-m at 1,600 min^{-1} {rpm}

Cummins QSB6.7

Photo: GR-600EX



Smooth Transmission

Electronically controlled, fully automatic transmission.
Torque converter driving full power shift with driving axle selector.
6 forward and 2 reverse speeds, constant mesh.

GR-800EX, GR-600EX

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

GR-500EX

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

GR-300EX

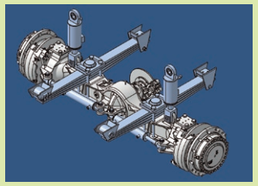
4 speeds - High range - 2 wheel drive; 4 wheel drive
4 speeds - Low range - 4 wheel drive

Fastest Travel Speed (GR-500EX, GR-300EX)

Maximum travel speed 50 km/h ∗25 km/h ∗EURO SPEC
GR-500EX: Mitsubishi Engine + 6 forward speeds transmission
GR-300EX: Cummins Engine + 6 forward speeds transmission

Comfortable Suspension (GR-500EX, GR-300EX)

Semi-elliptic leaf springs with hydraulic lockout device provide good riding comfort.



Axle

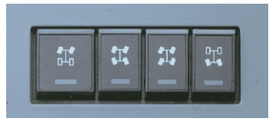
Front: Full floating type, steering and driving axle with planetary reduction.
Rear: Full floating type, steering and driving axle with planetary reduction and non-spin rear differential.

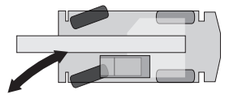
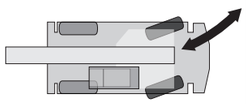
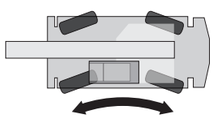
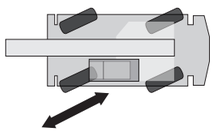
Brake Systems

Service: Air over hydraulic disc brakes on all 4 wheels.
Parking/Emergency: Spring applied-air released brake acting on input shaft of front axle.
Auxiliary: Electropneumatic operated exhaust brake.

4 Steering Mode

Hydraulic power steering controlled by steering wheel.



			GR-800EX	GR-600EX	GR-500EX	GR-300EX
Traveling on roads / Driving in work site		**2 wheel front** Front wheel only steering. This steering method is the same as that of general vehicles.	○	○	○	○
Driving in work site		**2 wheel rear** Rear wheel only steering. The rear end of the vehicle swings outward like forklifts. Useful for easy approach of a narrow area.	○	○	—	—
		**4 wheel coordinated** Front and rear wheels are steered in opposite directions. The turning radius is decreased. Useful for movement in a small area.	○	○	○	○
		**4 wheel crab** Front and rear wheels are steered in the same direction. The vehicle can move diagonally. Useful for pulling over.	○	○	○	○

GR-800EX

Max. traveling speed: 36 km/h
∗25 km/h ∗EURO SPEC
Overall length: approx. 14,375 mm
Overall width: approx. 3,315 mm
Overall height: approx. 3,795 mm
Min. turning radius (at center of extreme outer tire)
2-wheel steering: 11.9 m
4-wheel steering: 6.8 m

GR-600EX

Max. traveling speed: 36 km/h
∗25 km/h ∗EURO SPEC
Overall length: approx. 13,380 mm
Overall width: approx. 3,315 mm
Overall height: approx. 3,790 mm
Min. turning radius (at center of extreme outer tire)
2-wheel steering: 11.9 m
4-wheel steering: 6.8 m

GR-500EX

Max. traveling speed: 50 km/h
∗25 km/h ∗EURO SPEC
Overall length: approx. 13,055 mm
Overall width: approx. 2,980 mm
Overall height: approx. 3,765 mm
Min. turning radius (at center of extreme outer tire)
2-wheel steering: 11.7 m
4-wheel steering: 6.7 m

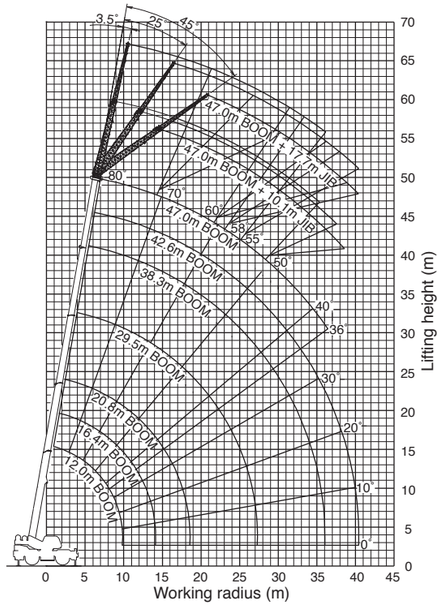
GR-300EX

Max. traveling speed: 50 km/h
∗25 km/h ∗EURO SPEC
Overall length: approx. 11,245 mm
Overall width: approx. 2,620 mm
Overall height: approx. 3,535 mm
Min. turning radius (at center of extreme outer tire)
2-wheel steering: 9.8 m
4-wheel steering: 5.8 m

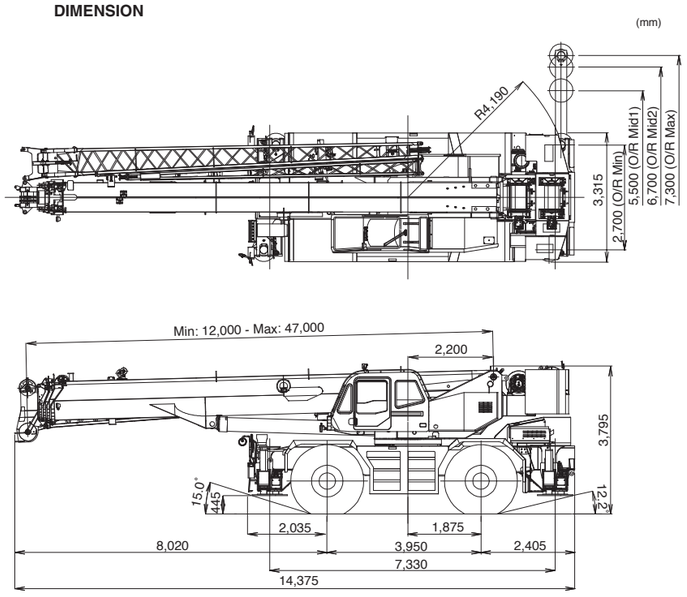
WORKING RANGE & DIMENSION

GR-800EX

WORKING RANGE

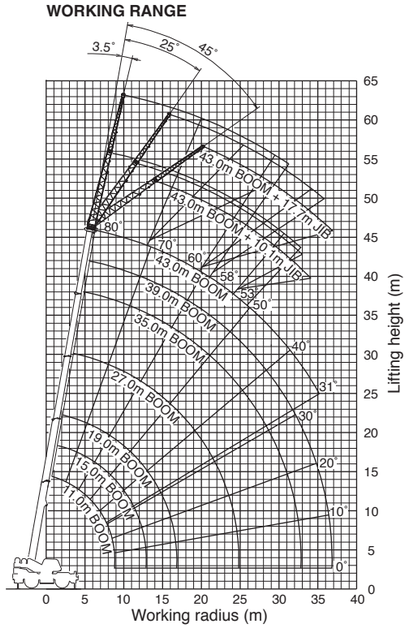


DIMENSION



GR-600EX

WORKING RANGE



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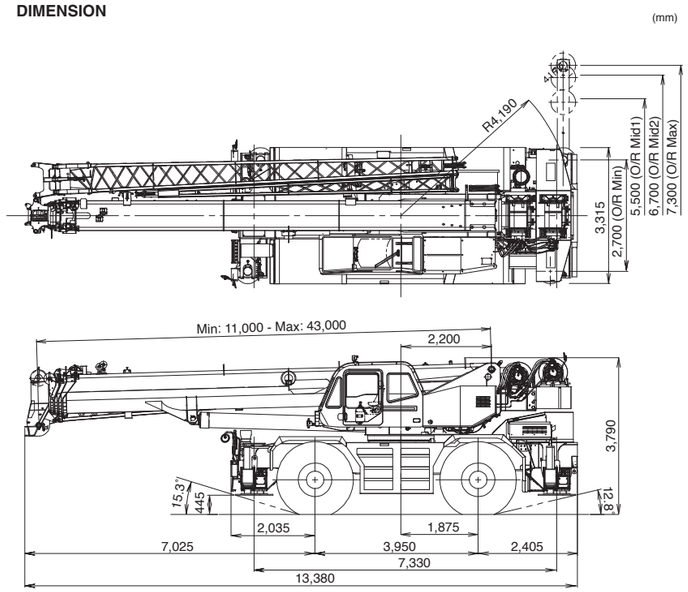
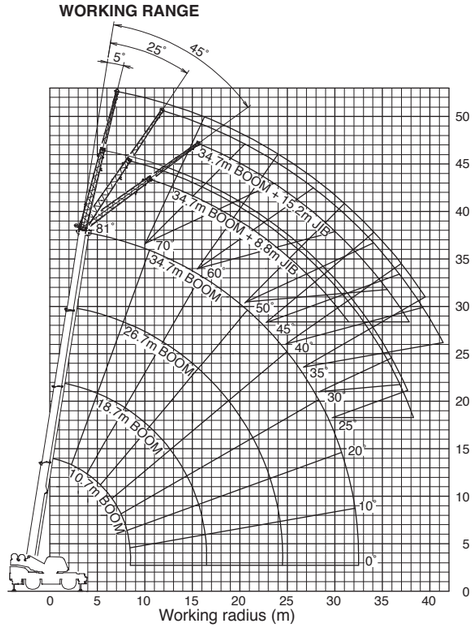


GR-500EX

WORKING RANGE



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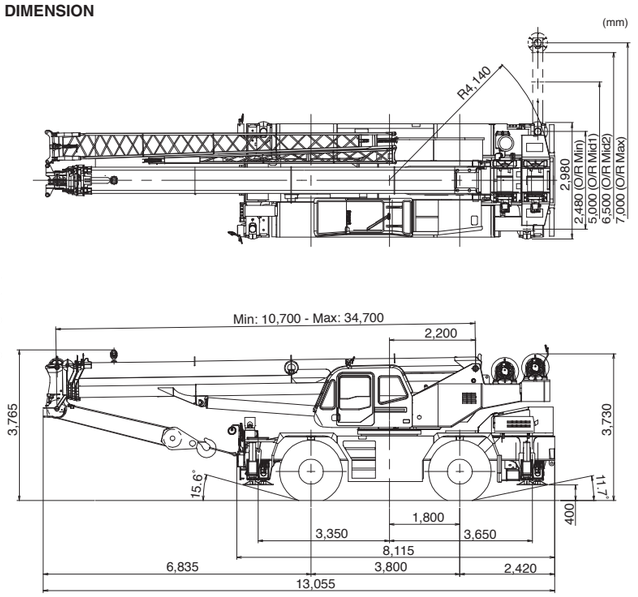
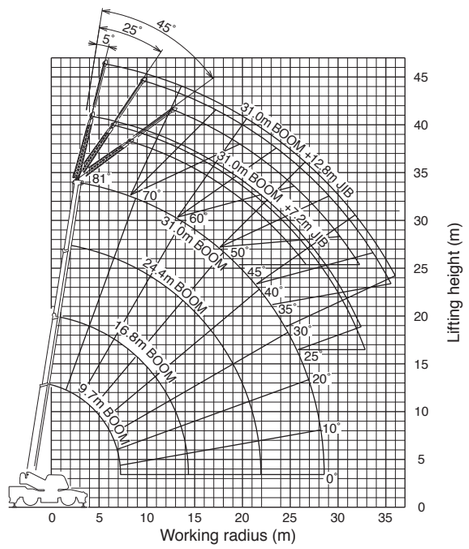


GR-300EX

WORKING RANGE



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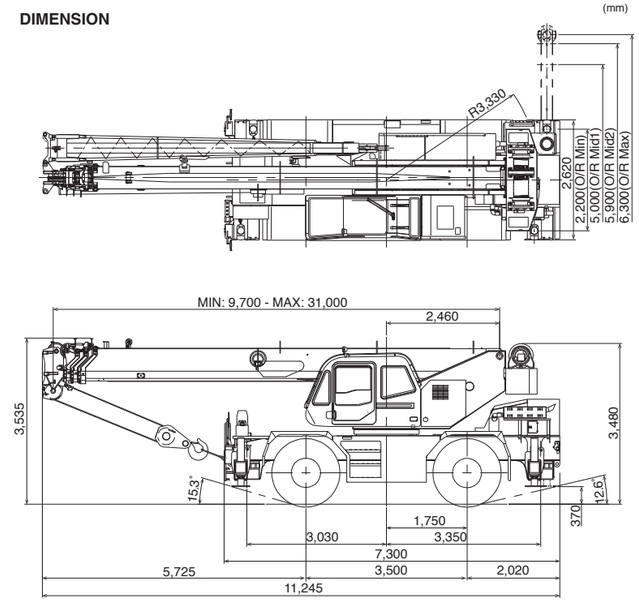

SPECIFICATIONS

MODEL	GR-800EX	GR-600EX
MAXIMUM CAPACITY	80,000 kg at 3.0 m	60,000 kg at 3.0 m
TRAVELING SPEED (MAX.)	36 km/h ＊25 km/h ＊EURO SPEC	36 km/h ＊25 km/h ＊EURO SPEC
GRADEABILITY (TAN θ)	94 % (at stall) ＊30 % (17˚: MITSUBISHI 6M60-TL) ＊＊57 % (30˚: Cummins QSB6.7) ＊EURO SPEC ＊Machine should be operated within the limit of engine crankcase design.	147 % (at stall) ＊30 % (17˚: MITSUBISHI 6M60-TL) ＊＊57 % (30˚: Cummins QSB6.7) ＊EURO SPEC ＊Machine should be operated within the limit of engine crankcase design.
WEIGHT Gross vehicle mass -front axle -rear axle	51,410 kg 24,325 kg 27,085 kg	43,735 kg 21,555 kg 22,180 kg
MIN. TURNING RADIUS	11.9 m (2-wheel steering), 6.8 m (4-wheel steering) (at center of extreme outer tire)	11.9 m (2-wheel steering), 6.8 m (4-wheel steering) (at center of extreme outer tire)
BOOM Fully retracted length Fully extended length Extension speed Elevation speed	5-section full length power telescoping boom. 12.0 m 47.0 m 35.0 m in 160 seconds 20˚ to 60˚ in 46 seconds	5-section full length power telescoping boom. 11.0 m 43.0 m 32.0 m in 128 seconds 20˚ to 60˚ in 46 seconds
JIB Length	2-staged slewing around boom extension. Triple offset (3.5˚/25˚/45˚) type. Assistant cylinders for mounting and stowing. 10.1 m and 17.7 m	2-staged slewing around boom extension. Triple offset (3.5˚/25˚/45˚) type. Assistant cylinders for mounting and stowing. 10.1 m and 17.7 m
MAIN WINCH Single line pull Single line speed Wire rope	Variable speed type with grooved drum driven by hydraulic axial piston motor. 64.7 kN {6,600 kgf} 149 m / min. (at the 4th layer) 19 mm (Diameter)	Variable speed type with grooved drum driven by hydraulic axial piston motor. 54.9 kN {5,600 kgf} 136 m / min. (at the 4th layer) 19 mm (Diameter)
AUXILIARY WINCH Single line pull Single line speed Wire rope	Variable speed type with grooved drum driven by hydraulic axial piston motor. 64.7 kN {6,600 kgf} 149 m / min. (at the 4th layer) 19 mm (Diameter)	Variable speed type with grooved drum driven by hydraulic axial piston motor. 54.9 kN {5,600 kgf} 136 m / min. (at the 4th layer) 19 mm (Diameter)
SLEWING SPEED Tail slewing radius	1.5 min^{-1} {rpm} 4,190 mm	2.4 min^{-1} {rpm} 4,190 mm
HYDRAULIC SYSTEM	Pumps... 2 variable piston pumps for telescoping, elevating and winches. Tandem gear pump for steering, slewing and optional equipment. Control valves.... Multiple valves actuated by pilot pressure with integral pressure relief valves. Circuit... Equipped with air cooled type oil cooler. Oil pressure appears on AML display for main circuit. Hydraulic oil tank capacity....approx. 840 liters	Pumps... 2 variable piston pumps for telescoping, elevating and winches. Tandem gear pump for steering, slewing and optional equipment. Control valves.... Multiple valves actuated by pilot pressure with integral pressure relief valves. Circuit... Equipped with air cooled type oil cooler. Oil pressure appears on AML display for main circuit. Hydraulic oil tank capacity....approx. 840 liters
TADANO Automatic Moment Limiter (Model: AML-C)	Main unit in crane cab gives audible and visual warning of approach to overload. Automatically cuts out crane motions before overload. With working range (load radius and/or boom angle and/or tip height and/or slewing range) limit function. Following functions are displayed. ・Moment load as percentage ・Number of parts of line of rope ・Boom angle ・Boom length ・Load radius ・Outriggers position ・On-tire indicator ・Actual hook load ・Permissible load ・Boom position indicator ・Potential hook height ・Slewing angle ・Main hydraulic oil pressure ・Jib length and jib offset angle (only when jib in operation)	Main unit in crane cab gives audible and visual warning of approach to overload. Automatically cuts out crane motions before overload. With working range (load radius and/or boom angle and/or tip height and/or slewing range) limit function. Following functions are displayed. ・Moment load as percentage ・Number of parts of line of rope ・Boom angle ・Boom length ・Load radius ・Outriggers position ・On-tire indicator・Actual hook load ・Permissible load ・Boom position indicator ・Potential hook height ・Slewing angle ・Main hydraulic oil pressure ・Jib length and jib offset angle (only when jib in operation)
OUTRIGGERS Extended width	4-hydraulically operated H-type outriggers. Each outrigger controlled simultaneously or independently from the crane cab. Equipped with extension width detector for each outrigger. Max. ... 7,300 mm, Middle ... 6,700 mm & 5,500 mm Minimum ... 2,700 mm, Float size (Diameter) ... 600 mm	4-hydraulically operated H-type outriggers. Each outrigger controlled simultaneously or independently from the crane cab. Equipped with extension width detector for each outrigger. Max. ... 7,300 mm, Middle ... 6,700 mm & 5,500 mm Minimum ... 2,700 mm, Float size (Diameter) ... 600 mm
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	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..... MITSUBISHI 6M60-TL ＊Cummins QSB 6.7 [EUROMOT ⅢB] ＊EURO SPEC Type ..... 4 cycle, turbo charged and after cooled, 6 cylinder in line, direct injection, water cooled diesel engine. Piston displacement... 7,545 cm^3 ＊6,700 cm^3 ＊EURO SPEC Max. output... 200 kW at 2,600 min^{-1} {rpm} ＊194 kW at 2,500 min^{-1} {rpm} ＊EURO SPEC Max. torque ... 785 N-m at 1,400 min^{-1} {rpm} ＊843 N-m at 1,600 min^{-1} {rpm} ＊EURO SPEC	Model..... MITSUBISHI 6M60-TL ＊Cummins QSB 6.7 [EUROMOT ⅢB] ＊EURO SPEC Type ..... 4 cycle, turbo charged and after cooled, 6 cylinder in line, direct injection, water cooled diesel engine. Piston displacement... 7,545 cm^3 ＊6,700 cm^3 ＊EURO SPEC Max. output ... 200 kW at 2,600 min^{-1} {rpm} ＊194 kW at 2,500 min^{-1} {rpm} ＊EURO SPEC Max. torque ... 785 N-m at 1,400 min^{-1} {rpm} ＊843 N-m at 1,600 min^{-1} {rpm} ＊EURO SPEC
TRANSMISSION	Electronically controlled full automatic transmission.	Electronically controlled full automatic transmission.
STEERING	Hydraulic power steering controlled by steering wheel. 4 steering modes available: 2-wheel front, 2-wheel rear 4-wheel coordinated, 4-wheel crab	Hydraulic power steering controlled by steering wheel. 4 steering modes available: 2-wheel front, 2-wheel rear 4-wheel coordinated, 4-wheel crab
SUSPENSION	Front..... Rigid mounted to the frame. Rear..... Pivot mounted with hydraulic lockout cylinders.	Front..... Rigid mounted to the frame. Rear..... Pivot mounted with hydraulic lockout cylinders.
TIRES	29.5 - 25 34PR(OR), Single x 4	29.5 - 25 22PR(OR) or 29.5–25 28PR(OR), Single x 4
FUEL TANK CAPACITY	300 liters	300 liters

MODEL	GR-500EX	GR-300EX
MAXIMUM CAPACITY	50,000 kg at 2.5 m	30,000 kg at 3.0 m
TRAVELING SPEED (MAX.)	50 km/h ＊25 km/h ＊EURO SPEC	50 km/h ＊25 km/h ＊EURO SPEC
GRADEABILITY (TAN θ)	69 % (at stall) ＊30 % (17˚: MITSUBISHI 6M60-TL) ＊＊57 % (30˚: Cummins QSB6.7) ＊EURO SPEC ＊Machine should be operated within the limit of engine crankcase design.	78 % (at stall) ＊57 % (30˚: Cummins QSB6.7) ＊Machine should be operated within the limit of engine crankcase design.
WEIGHT Gross vehicle mass -front axle -rear axle	33,920 kg ＊33,420 kg 17,360 kg ＊16,440 kg 16,560 kg ＊16,980 kg ＊EURO SPEC	26,920 kg ＊27,150 kg 13,170 kg ＊13,120 kg 13,750 kg ＊14,030 kg ＊EURO SPEC
MIN. TURNING RADIUS	11.7 m (2-wheel steering), 6.7 m (4-wheel steering) (at center of extreme outer tire)	9.8 m (2-wheel steering),5.8 m (4-wheel steering) (at center of extreme outer tire)
BOOM Fully retracted length Fully extended length Extension speed Elevation speed	4-section full length power telescoping boom. 10.7 m 34.7 m 24.0 m in 72 seconds 20˚ to 60˚ in 27 seconds	4-section full length power telescoping boom 9.7 m 31.0 m 21.3 m in 91 seconds 20˚ to 60˚ in 22 seconds
JIB Length	2-staged slewing around boom extension. Triple offset (5˚/25˚/45˚) type. Assistant cylinders for mounting and stowing. 8.8 m and 15.2 m	2-staged slewing around boom extension. Triple offset (5˚/ 25˚/ 45˚) type. 7.2 m and 12.8 m
MAIN WINCH Single line pull Single line speed Wire rope	Variable speed type with grooved drum driven by hydraulic axial piston motor. 54.9 kN {5,600 kgf} 136 m / min. (at the 4th layer) 19 mm (Diameter)	Variable speed type with grooved drum driven by hydraulic axial piston motor 39.2 kN {4,000 kgf} 125 m / min. (at the 4th layer) 16 mm (Diameter)
AUXILIARY WINCH Single line pull Single line speed Wire rope	Variable speed type with grooved drum driven by hydraulic axial piston motor. 54.9 kN {5,600 kgf} 118 m/min. (at the 2nd layer) 19 mm (Diameter)	Variable speed type with grooved drum driven by hydraulic axial piston motor 39.2 kN {4,000 kgf} 125 m / min.(at the 4th layer) 16 mm (Diameter)
SLEWING SPEED Tail slewing radius	2.7 min^{-1} {rpm} 4,140 mm	3.2 min^{-1} {rpm} 3,330mm
HYDRAULIC SYSTEM	Pumps... 2 variable piston pumps for telescoping, elevating and winches. Tandem gear pump for steering, slewing and optional equipment. Control valves.... Multiple valves actuated by pilot pressure with integral pressure relief valves. Circuit... Equipped with air cooled type oil cooler. Oil pressure appears on AML display for main circuit. Hydraulic oil tank capacity....approx. 560 liters	Pumps... 2 variable piston pumps for telescoping, elevating and winches. Tandem gear pump for steering, slewing and optional equipment. Control valves... Multiple valves actuated by pilot pressure with integral pressure relief valves. Circuit... Equipped with air cooled type oil cooler. Oil pressure appears on AML display for main circuit. Hydraulic oil tank capacity... approx. 380 liters
TADANO Automatic Moment Limiter (Model: AML-C)	Main unit in crane cab gives audible and visual warning of approach to overload. Automatically cuts out crane motions before overload. With working range (load radius and/or boom angle and/or tip height and/or slewing range) limit function. Following functions are displayed. ・Load as percentage ・Number of parts of line of rope ・Boom angle ・Boom length ・Load radius ・Outriggers position ・On-tire indicator ・Actual hook load ・Permissible load ・Boom position indicator ・Potential hook height ・Slewing angle ・Main hydraulic oil pressure ・Jib length and jib offset angle (only when jib in operation)	Main unit in crane cab gives audible and visual warning of approach to overload. Automatically cuts out crane motions before overload. With working range (load radius and/or boom angle and/or tip height and/or slewing range) limit function. Following functions are displayed. ・Load as percentage ・Number of parts of line of rope ・Boom angle ・Boom length ・Load radius ・Outriggers position ・On-tire indicator ・Actual hook load ・Permissible load ・Boom position indicator ・Potential hook height ・Slewing angle ・Main hydraulic oil pressure ・Jib length and jib offset angle (only when jib in operation)
OUTRIGGERS Extended width	4-hydraulically operated H-type outriggers. Each outrigger controlled simultaneously or independently from the crane cab. Equipped with extension width detector for each outrigger. Max. ... 7,000 mm, Middle ... 6,500 mm & 5,000 mm Minimum ... 2,480 mm, Float size (Diameter) ... 500 mm	4-hydraulically operated H-type outriggers. Each outrigger controlled simultaneously or independently from the cab. Equipped with extension width detector for each outrigger. Max. ...6,300 mm, Middle ... 5,900 mm & 5,000mm Minimum ... 2,200 mm, Float size (Diameter) ... 400 mm
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	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..... MITSUBISHI 6M60-TL ＊Cummins QSB 6.7 [EUROMOT ⅢB] ＊EURO SPEC Type ..... 4 cycle, turbo charged and after cooled, 6 cylinder in line, direct injection, water cooled diesel engine. Piston displacement... 7,545 cm^3 ＊6,700 cm^3 ＊EURO SPEC Max. output ... 200 kW at 2,600 min^{-1} {rpm} ＊194 kW at 2,500 min^{-1} {rpm} ＊EURO SPEC Max. torque ... 785 N-m at 1,400 min^{-1} {rpm} ＊843 N-m at 1,600 min^{-1} {rpm} ＊EURO SPEC	Model..... Cummins QSB6.7 ＊Cummins QSB 6.7 [EUROMOT ⅢB] ＊EURO SPEC Type ..... 4 cycle, turbo charged and after cooled, 6 cylinder in line, direct injection, water cooled diesel engine. Piston displacement...6,700 cm^3 Max. output ... 160 kW at 2,500 min^{-1} {rpm} Max. torque ... 843 N-m at 1,600 min^{-1} {rpm}
TRANSMISSION	Electronically controlled full automatic transmission.	Electronically controlled full automatic transmission.
STEERING	Hydraulic power steering controlled by steering wheel. 3 steering modes available: 2-wheel front, 4-wheel coordinated, 4-wheel crab	Hydraulic power steering controlled by steering wheel. 3 steering modes available: 2-wheel front, 4-wheel coordinated, 4-wheel crab
SUSPENSION	Front..... Semi-elliptic leaf springs with hydraulic lockout device. Rear..... Semi-elliptic leaf springs with hydraulic lockout device.	Front..... Semi-elliptic leaf springs with hydraulic lockout device. Rear..... Semi-elliptic leaf springs with hydraulic lockout device.
TIRES	23.5–25 (OR), Single x 4	445 / 95 R 25(OR), Single x 4
FUEL TANK CAPACITY	300 liters	300 liters

*Some specifications are subject to change