

MODEL: GR-1100EX

SPECIFICATIONS

MAXIMUM CAPACITY PERFORMANCE	110,000 kg at 2.5 m
Max. traveling speed	19 km/h
Gradeability (tan θ)	84% (at stall), 30%* * Machine should be operated within limit of engine crackcase design. (17°: MITSUBISHI 6M60-TLU3R)
WEIGHT	Gross vehicle mass -1st axle 55,474 kg -2nd axle 27,775 kg 27,699 kg
MIN. TURNING RADIUS	2-wheel steer: 11.9 m 4-wheel steer: 6.8 m (at center of extreme outer tire)
BOOM	6-section extended by single telescoping cylinder. Fully retracted length 12.0 m Fully extended length 56.0 m Extension speed 44.0 m in 340 s Angle -1.5°-81° Elevation speed 20° to 60° in 40 s
JIB	2 stage bi-fold lattice type; Single sheave at the head of both jib sections. Offset Length 3.5°, 25° or 45° 10.1 m, 17.7 m
MAIN WINCH	Variable speed type with grooved drum driven by hydraulic axial piston motor. Single line pull 9,900 kgf Single line speed 136 m/min. (at the 4th layer) Wire rope 19 mm x 300 m (Diameter x length)
AUXILIARY WINCH	Variable speed type with grooved drum driven by hydraulic axial piston motor. Single line pull 9,900 kgf Single line speed 117 m/min. (at the 2nd layer) Wire rope 19 mm x 158 m (Diameter x length)
SLEWING	Slewing speed 1.5 min ⁻¹ {rpm} Tail slewing radius 4,390 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... 763 lit. capacity. External sight level gauge. Oil cooler... Air cooled fan type.

TADANO Automatic Moment limiter (TADANO AML-C)	Following information is displayed: • Control lever lockout function with audible and visual pre-warning • Boom position indicator • Outrigger state indicator • Boom angle / boom length / jib offset angle / jib length / load radius / rated lifting capacities / actual loads read out • 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 • Fuel consumption monitor • Main winch / auxiliary winch select • Drum rotation indicator (audible and visible type) main and auxiliary winch
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. ... 7,300 mm, Mid. ... 5,500 mm & 6,700 mm, Min. ... 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.
ENGINE	Model... MITSUBISHI 6M60-TLU3R Type... 4-cycle, turbo charged and after cooled, direct injection diesel. Piston displacement ... 7.54 liters Bore x stroke... 118 mm x 115 mm Max. output... Gross 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 controlled by steering wheel. 4 steering modes available: 2-wheel front, 2-wheel rear, 4-wheel coordinated and 4 wheel crab
SUSPENSION	Front: Rigid mounted to frame. Rear : Pivot mounted with hydraulic lockout device.
TIRES	29.5-25 34PR (OR)
FUEL TANK CAPACITY	300 lit.



Lifting your dreams

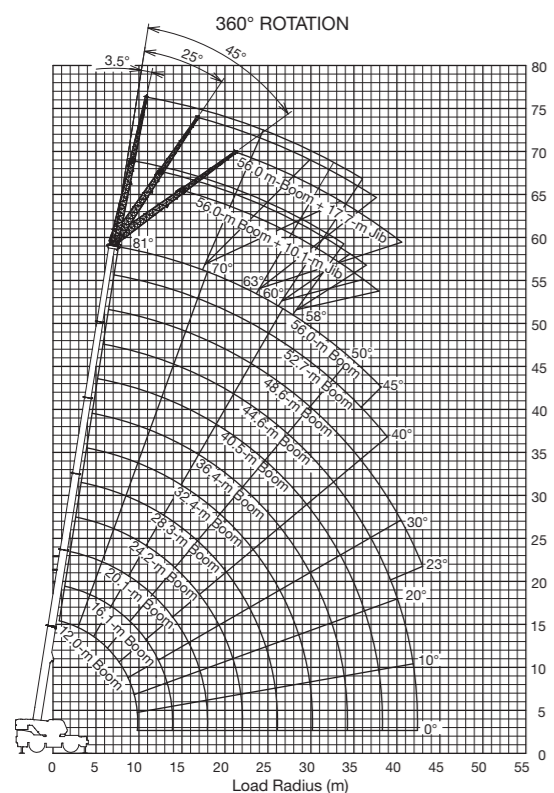
ROUGH TERRAIN CRANE

GR-1100EX

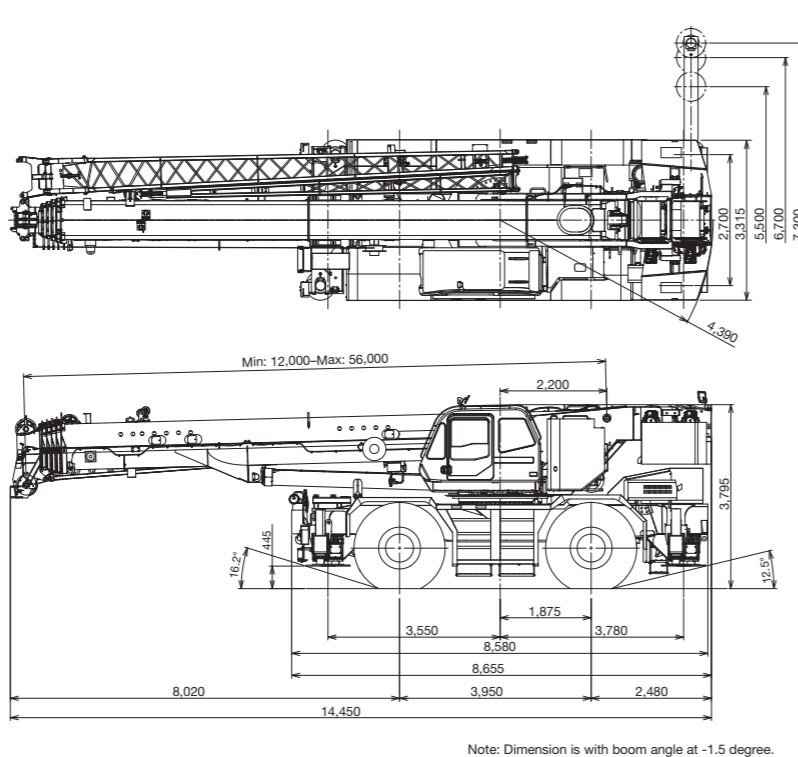
110 METRIC TON CAPACITY



WORKING RANGE



DIMENSION



Note: Some specifications are subject to change.

*The GR-1100EX:
High Quality We Are Proud Of*



TADANO LTD. (International Sales Division)
4-12, Kamezawa 2-chome, Sumida-ku Tokyo 130-0014, Japan
Phone: +81-3-3621-7750 Fax: +81-3-3621-7785
<http://www.tadano.com/> E-mail: info@tadano.com



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 operational safety.

Single telescopic cylinder

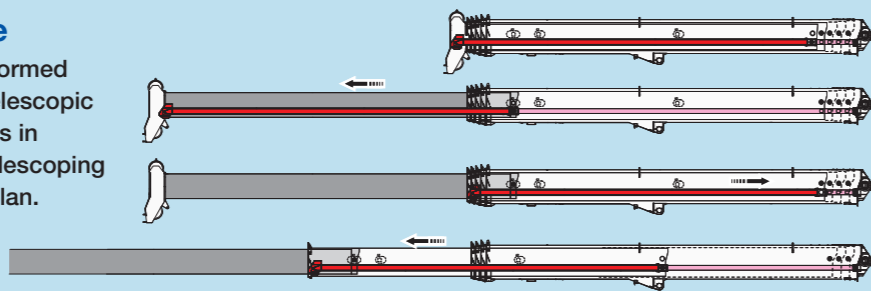
6 box type sections consisting of 1 base section and 5 telescopic sections are extended by a single telescopic cylinder. All sections are fully extended/retracted automatically and locked in the selected working position.

Ultimate boom for rough terrain crane

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

Outline of telescoping mode

Boom telescoping of the 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.



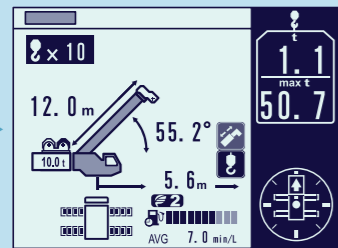
Display telescoping status

The cylinder and each boom section's conditions are displayed on the AML using the Telescoping monitor switch.

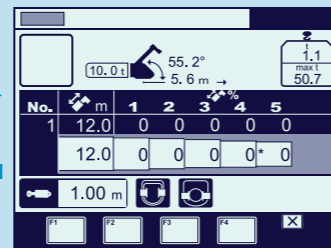


Telescoping status indicator

AML displays load moment indicator



No.	m	1	2	3	4	5
1	12.0	0	0	0	0	0
2	16.1	0	0	0	0	46
3	20.1	0	0	0	0	92
4	24.2	0	0	0	0	46
5	28.3	0	0	0	0	92
6	32.4	0	0	46	92	92
7	36.4	0	0	92	92	92
8	40.5	0	46	92	92	92
9	44.6	0	92	92	92	92

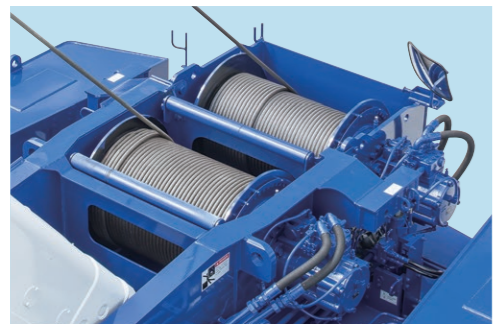


Telescoping status screen

Two winches with cable follower

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

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



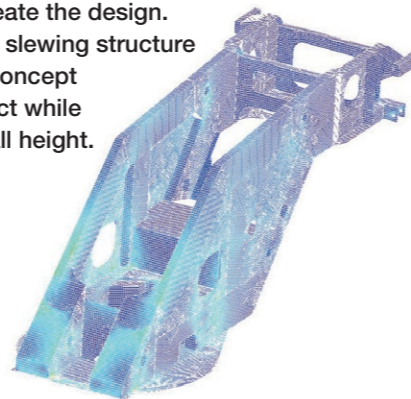
New crane structure

When developing the crane structure, importance was attached to the shape that is best suited for crane operation.

FEM analysis was used to create the design.

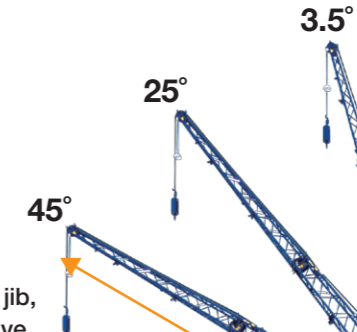
It was also important that the slewing structure be true to Tadano's original concept and be both rigid and compact while maintaining a desirable overall height.

*FEM: Finite Element Method



Assist cylinder for jib

When mounting and stowing the jib, an assist cylinder ensures effective operation by increasing the work efficiency of jib mounting and storage.



Bi-fold jib

A two-stage, bi-fold lattice-type jib can be offset at 3.5°, 25°, and 45° to enable the crane to carry out jobs that require extra reaching ability.

10.1 m, 17.7 m

Longest boom and improved capacity
12.0 m–56.0 m

Operator comfort

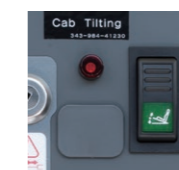
The crane cab provides improved livability and offers the operator a more comfortable working environment.



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

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° and 15°.



Cab tilt indicator and switch



-1.5° - 81.0°



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, operating pressure of the elevating cylinder, the extension width of outriggers, slewing position, rated lifting capacity and present hook load. 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 slow stop function to avoid shock loads.

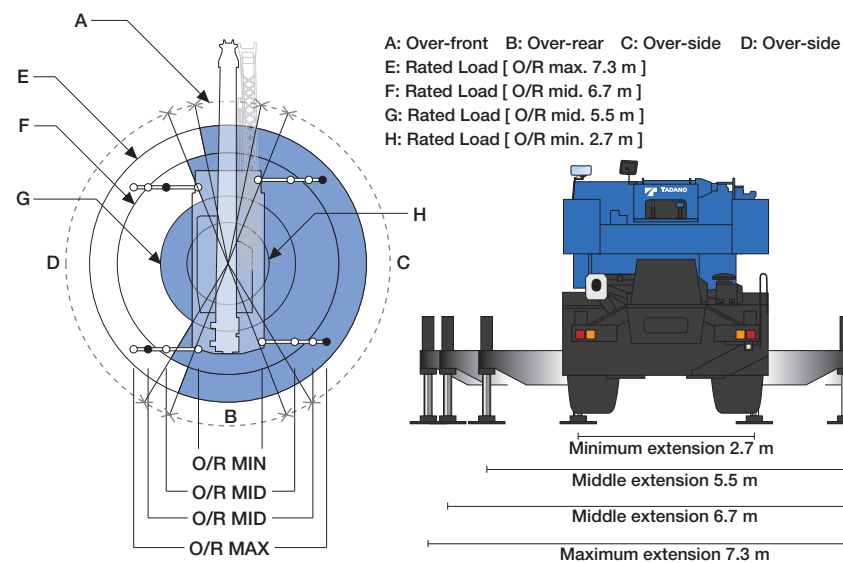
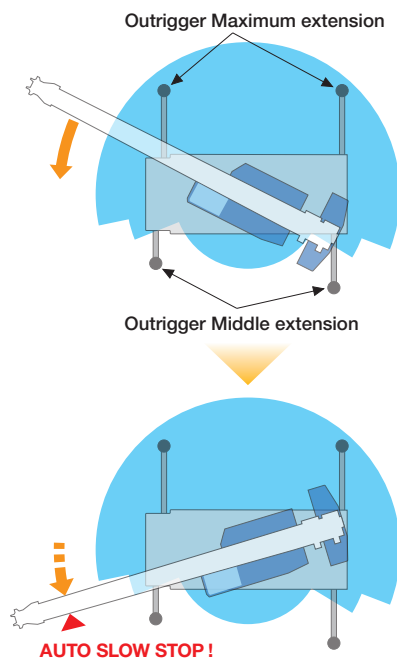
The AML-C with "OPERATOR" pre-set working range limits and automatic slow stop functions will assist the operator to deliver safe smooth operations.



AML lamp

Control of asymmetric extension width of outriggers

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. Regardless of operator awareness, the AML-C's slow stop function will help to minimize any safety risk.

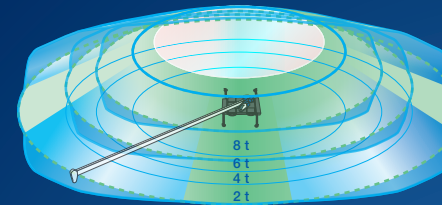


Smart Chart system

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

In the case of GR-1100EX

Main Boom: 56.0 m
 Outrigger: Maximum extension



An example of effects with the Smart Chart (Comparison with conventional control)

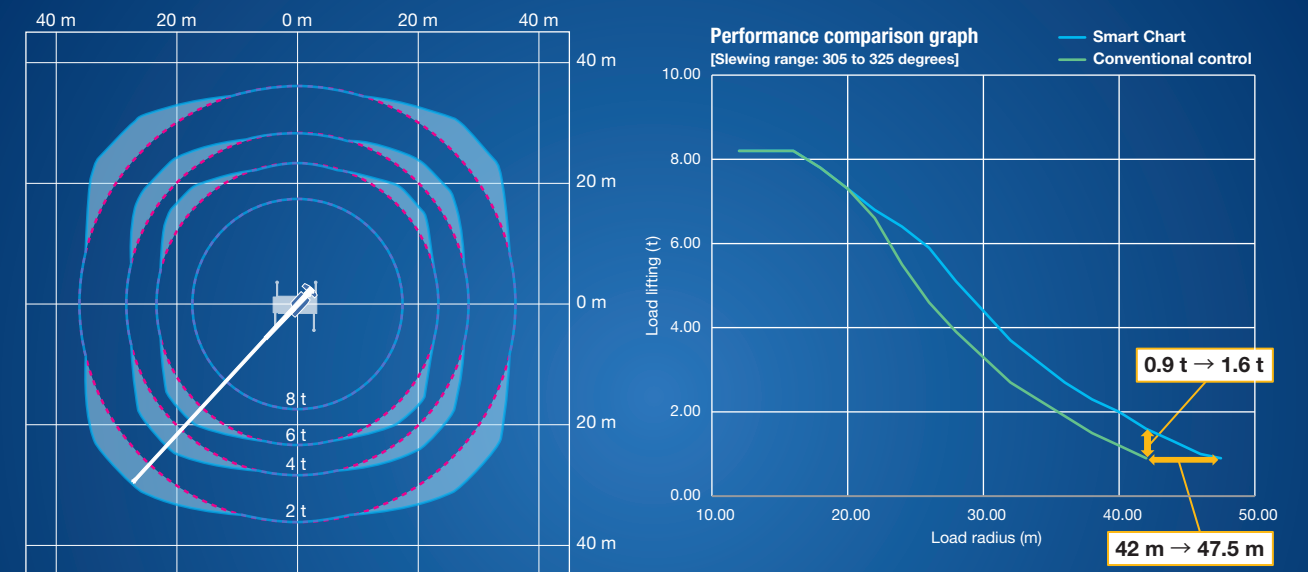
Load radius
42 m → 47.5 m

Approx. **13%** expansion

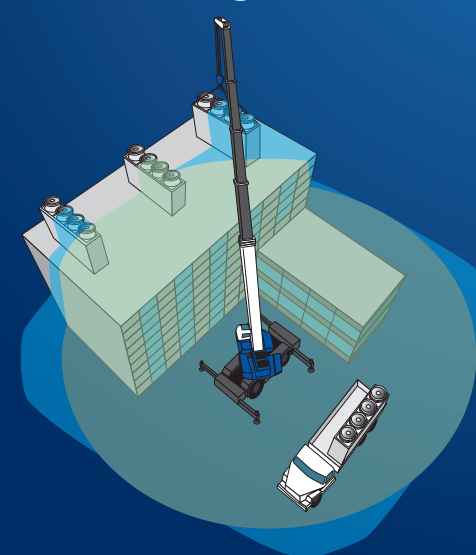
Load lifting capacity

0.9 t → 1.6 t

Approx. **78%** improvement



New working area Smart Chart creates for you.



In maximum outrigger extension setups

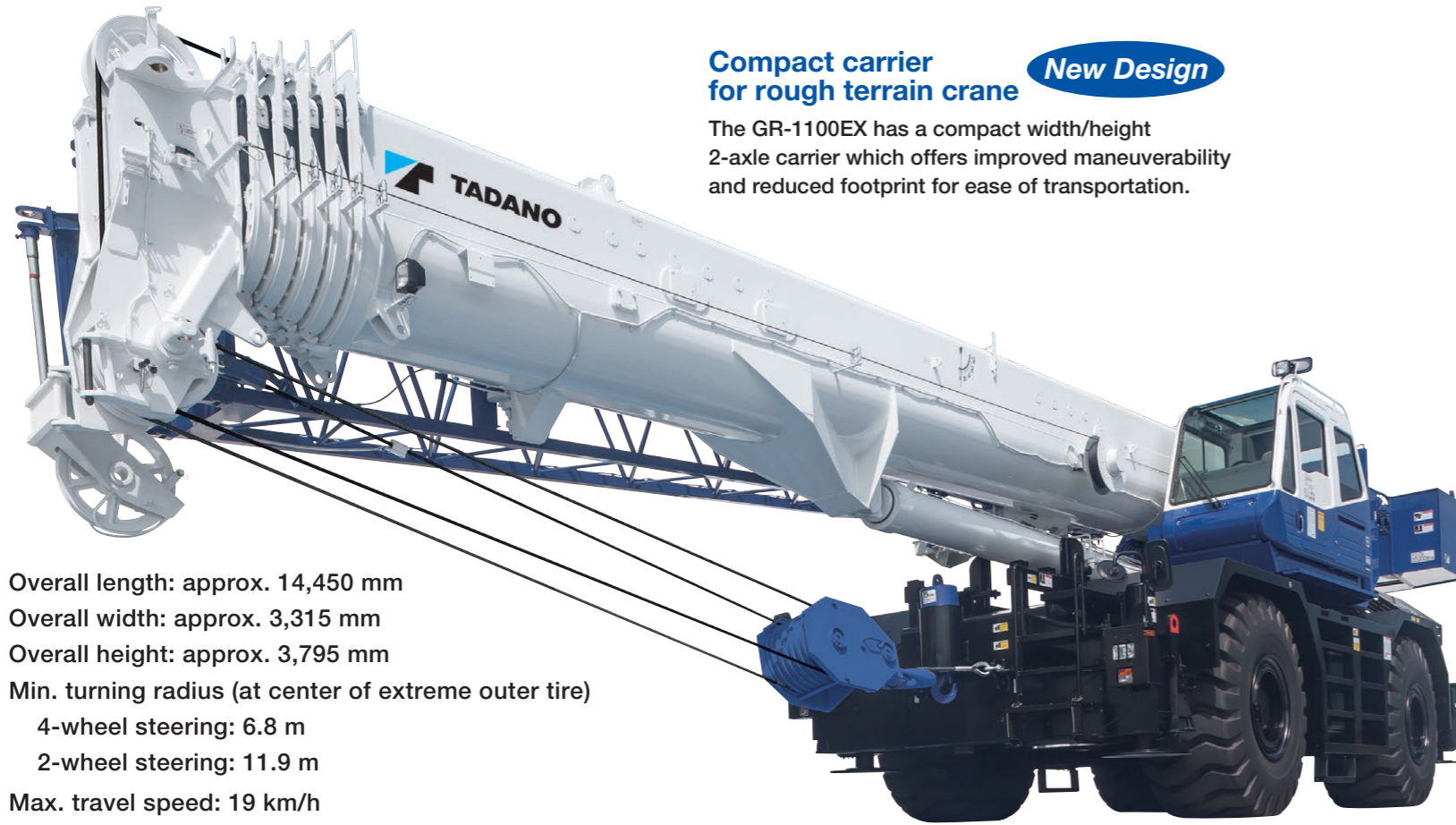
The Smart Chart taps the potential of a crane by expanding the conventional circular working area into a square one, improving work safety and efficiency.



In asymmetrical outrigger extension setups

In a site where all outriggers cannot be extended fully, the Smart Chart always draws out maximum work performance to support your job. Even in a work site where space is limited, the Smart Chart provides a safe and comfortable work environment.

Carrier



Compact carrier for rough terrain crane **New Design**

The GR-1100EX has a compact width/height 2-axle carrier which offers improved maneuverability and reduced footprint for ease of transportation.

- Overall length: approx. 14,450 mm
- Overall width: approx. 3,315 mm
- Overall height: approx. 3,795 mm
- Min. turning radius (at center of extreme outer tire)
 - 4-wheel steering: 6.8 m
 - 2-wheel steering: 11.9 m

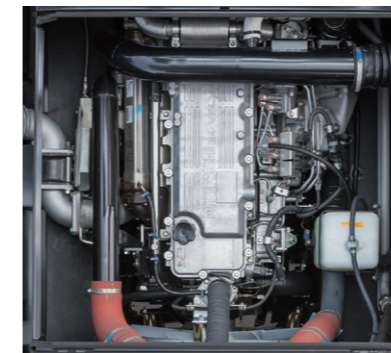
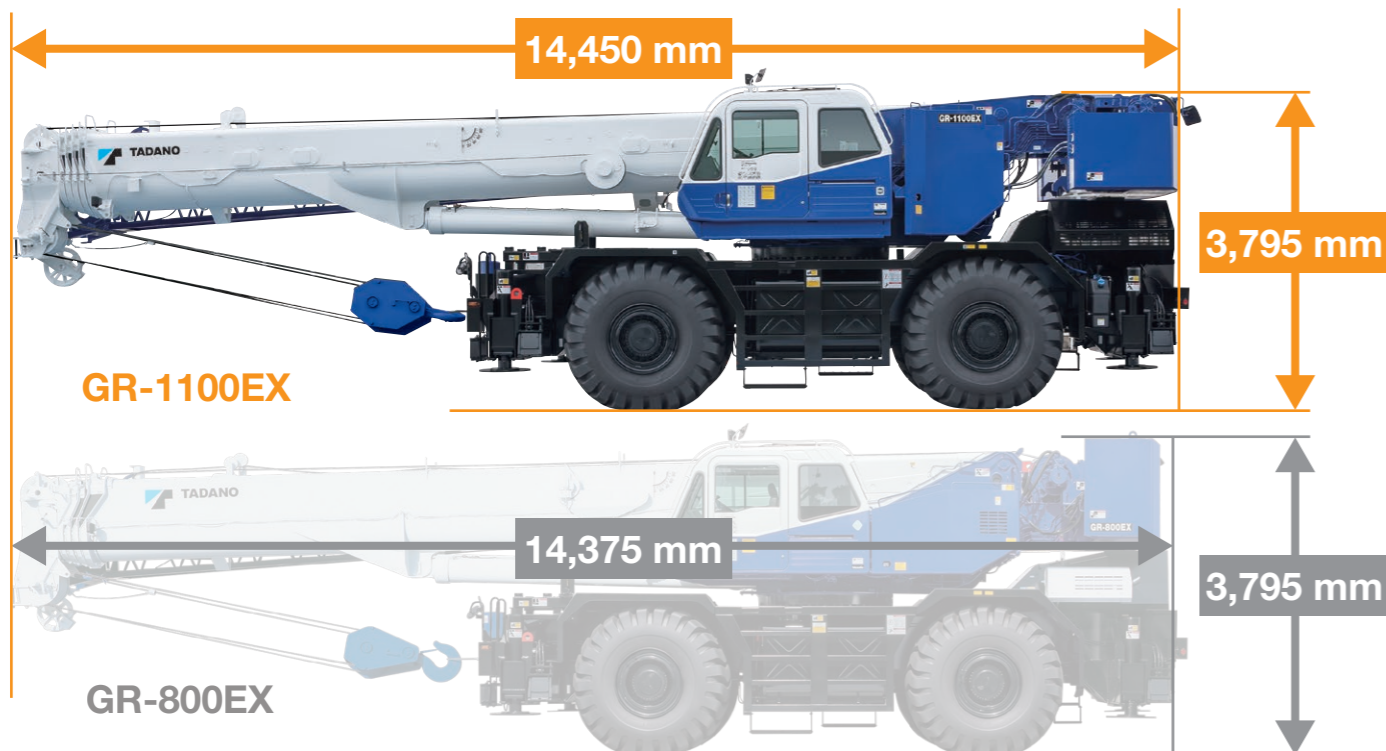
Max. travel speed: 19 km/h

Gradeability (tan θ): 84% (at stall), 30%*

* Machine should be operated within the limit of engine crankcase design (17°: MITSUBISHI 6M60-TLU3R)

Highly Maneuverable Compact Carrier

The GR-1100EX features a compact carrier that is nearly the same size as Tadano's smaller capacity GR-800EX. Its compactness makes the GR-1100EX both highly maneuverable and easy to transport.



High performance engine

MITSUBISHI 6M60-TL

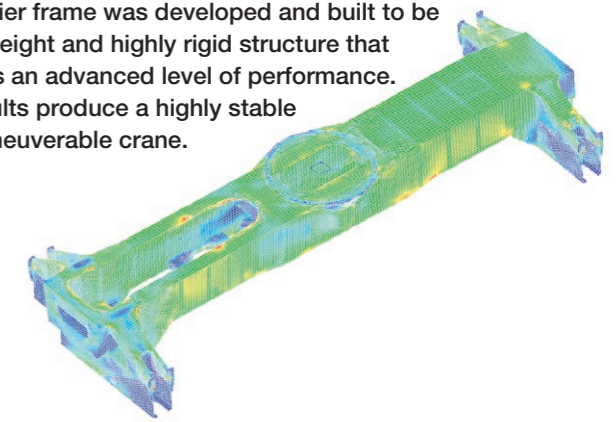
4-cycle, turbo charged and after cooled, direct injection diesel engine.

Max. output: 200 kW at 2,600 min⁻¹ {rpm}

Max. torque: 785 N-m at 1,400 min⁻¹ {rpm}

New carrier frame

The carrier frame was developed and built to be a light weight and highly rigid structure that achieves an advanced level of performance. The results produce a highly stable and maneuverable crane.



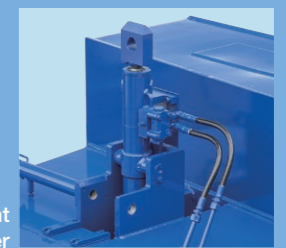
Mounting and dismounting systems



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

