



GR-300EX

Left hand steering

GENERAL DATA

| | | |
|-----------------------------|----------|---------------------------|
| CRANE CAPACITY | | 30,000 kg at 3.0 m |
| BOOM | | 4-section, 9.7 m - 31.0 m |
| DIMENSION | | |
| Overall length | approx. | 11,245 mm |
| Overall width | approx. | 2,620 mm |
| Overall height | approx. | 3,535 mm |
| MASS | | |
| Gross vehicle mass | approx. | 26,920 kg |
| — front axle | approx. | 13,170 kg |
| — rear axle | approx. | 13,750 kg |
| PERFORMANCE | | |
| Max. travelling speed | computed | 50 km/h |
| Gradeability(tan θ) | computed | 78 % (at stall) *57 % |

*Machine should be operated within the limit of engine crankcase design (30°: Cummins QSB6.7)

CRANE SPECIFICATIONS

MODEL

GR-300EX

CAPACITY

30,000 kg at 3.0 m

BOOM

4-section full power partially synchronized telescoping boom of round hexagonal box construction with 3 sheaves at boom head. The synchronization system consists of 2 telescope cylinders, extension cables and retraction cables.

Hydraulic cylinders fitted with holding valves.

Fully retracted length9.7 m

Fully extended length31.0 m

Extension speed21.3 m in 91 s

JIB

2-staged swingaround boom extension. Triple offset (5°/25°/45°) type. Box type top section telescopes from lattice type base section which stows alongside base boom section.

Single sheave at jib head.

Length.....7.2 m and 12.8 m

SINGLE TOP (AUXILIARY BOOM SHEAVE)

Single sheave. Mounted to main boom head for single line work.

ELEVATION

By a double-acting hydraulic cylinder, fitted with a holding valve.

Automatic speed reduction and soft stop function.

Boom angle..... 0° to 81°

Boom raising speed..... 20° to 60° in 22s

HOIST—Main winch

Variable speed type with grooved drum driven by hydraulic axial piston motor through winch speed reducer. Power load lowering and hoisting.

Equipped with automatic brake (Neutral brake) and counterbalance valve.

Controlled independently of auxiliary winch.

Single line pull39.2 kN {4,000 kgf}

Single line speed125 m/min (at the 4th layer)

Wire rope.....Spin-resistant type

Diameter x length16 mm x 170 m

HOOK BLOCK

30 t capacity

4 sheaves, swivel type hook with safety latch.

HOIST—Auxiliary winch

Variable speed type with grooved drum driven by hydraulic axial piston motor through winch speed reducer. Power load lowering and hoisting.

Equipped with automatic brake (Neutral brake) and counter-balance valve.

Controlled independently of main winch.

- Single line pull39.2 kN {4,000 kgf}
- Single line speed125 m/min (at the 4th layer)
- Wire ropeSpin-resistant type
- Diameter x length16 mm x 98 m

HOOK BLOCK

4.0 t capacity

Swivel hook with safety latch for single line use.

SWING

Hydraulic axial piston motor driven through planetary speed reducer. Continuous 360° full circle swing on ball bearing slew ring. Equipped with manually locked/released swing brake.

- Swing speed3.2 min⁻¹ {rpm}

HYDRAULIC SYSTEM

- Pumps2 variable piston pumps for telescoping, elevating and winches.
Tandem gear pump for steering, swing and optional equipment.
- Control valvesMultiple valves actuated by pilot pressure with integral pressure relief valves.
- CircuitEquipped with air cooled type oil cooler.
Oil pressure appears on AML display for main circuit.
- Hydraulic oil tank capacity
approx. 380 liters
- FiltersReturn line filter

CRANE CONTROL

By 4 control levers for swing, boom hoist, main winch, boom telescoping or auxiliary winch with 2 control pedals for boom hoist and boom telescoping based on ISO standard layout. Control lever stands can change neutral positions and tilt for easy access to cab.

CAB

Both crane and drive operations can be performed from one cab mounted on rotating superstructure. One sided one-man type, steel construction with sliding door access and tinted safety glass windows opening at side. Door window is powered control.

Operator's 3 way adjustable seat with headrest and armrest. Hot water cab heater and air conditioning.

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 swing range) limit function.

Automatic Speed Reduction and Soft Stop function on boom elevation and swing.

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
- Swing angle
- Main hydraulic oil pressure
- Jib length and jib offset angle (only when jib operation)

OUTRIGGERS

Hydraulically operated H-type outriggers. Each outrigger controlled simultaneously or independently from the cab. Equipped with sight level gauge. Floats mounted integrally with the jacks retract to within vehicle width. All cylinders fitted with pilot check valves. Crane operation with different extended length of each outrigger. Equipped with extension width detector for each outrigger.

- Extended width
 - Fully 6,300mm
 - Middle 5,900mm
 - Middle 5,000mm
 - Minimum 2,200mm
 - Float size (Diameter) 400mm

COUNTERWEIGHT

Integral with swing frame

- Mass 2,380 kg

NOTE : Each crane motion speed is based on unladen conditions.

TYPE

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

FRAME

High-tensile steel, all welded mono-box construction.

ENGINE

Model.....Cummins QSB6.7 [EUROMOT Stage IIIA]
Type.....4 cycle, turbo charged and after cooled, 6 cylinder in line, direct injection, water cooled diesel engine.
Piston displacement6,700 cm³
Bore x stroke107 mm x 124 mm
Max. output.....160 kW {220 PS} at 2,500 min⁻¹ {rpm}
Max. torque843 N-m {86 kgf-m} at 1,600 min⁻¹ {rpm}

TRANSMISSION

Electronically controlled full automatic transmission.
Torque converter driving full powershift with driving axle selector.
6 forward and 2 reverse speeds.
2 speeds - High range - 2 wheel drive ; 4 wheel drive
4 speeds - Low range - 4 wheel drive

AXLES

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

STEERING

Hydraulic power steering controlled by steering wheel.
Three steering modes available:
2-wheel front
4-wheel coordinated
4-wheel crab

SUSPENSION

FrontSemi-elliptic leaf springs with hydraulic lockout device.
Rear.....Semi-elliptic leaf springs with hydraulic lockout device.

BRAKE SYSTEM

ServiceAir over hydraulic disc brakes on all 4 wheels.
Parking / Emergency.....
Spring applied-air released brake acting on input shaft of front axle.
Auxiliary....Electro-pneumatic operated exhaust brake.

ELECTRIC SYSTEM

24 V DC. 2 batteries of 12 V - 120 Ah capacity.

FUEL TANK CAPACITY

300 liters

TIRES

Front445 / 95 R 25(OR), Single x 2
Rear.....445 / 95 R 25(OR), Single x 2

TURN RADIUS

Min. turning radius (at center of extreme outer tire)
2-wheel steering 9.8 m
4-wheel steering 5.8 m

EQUIPMENT

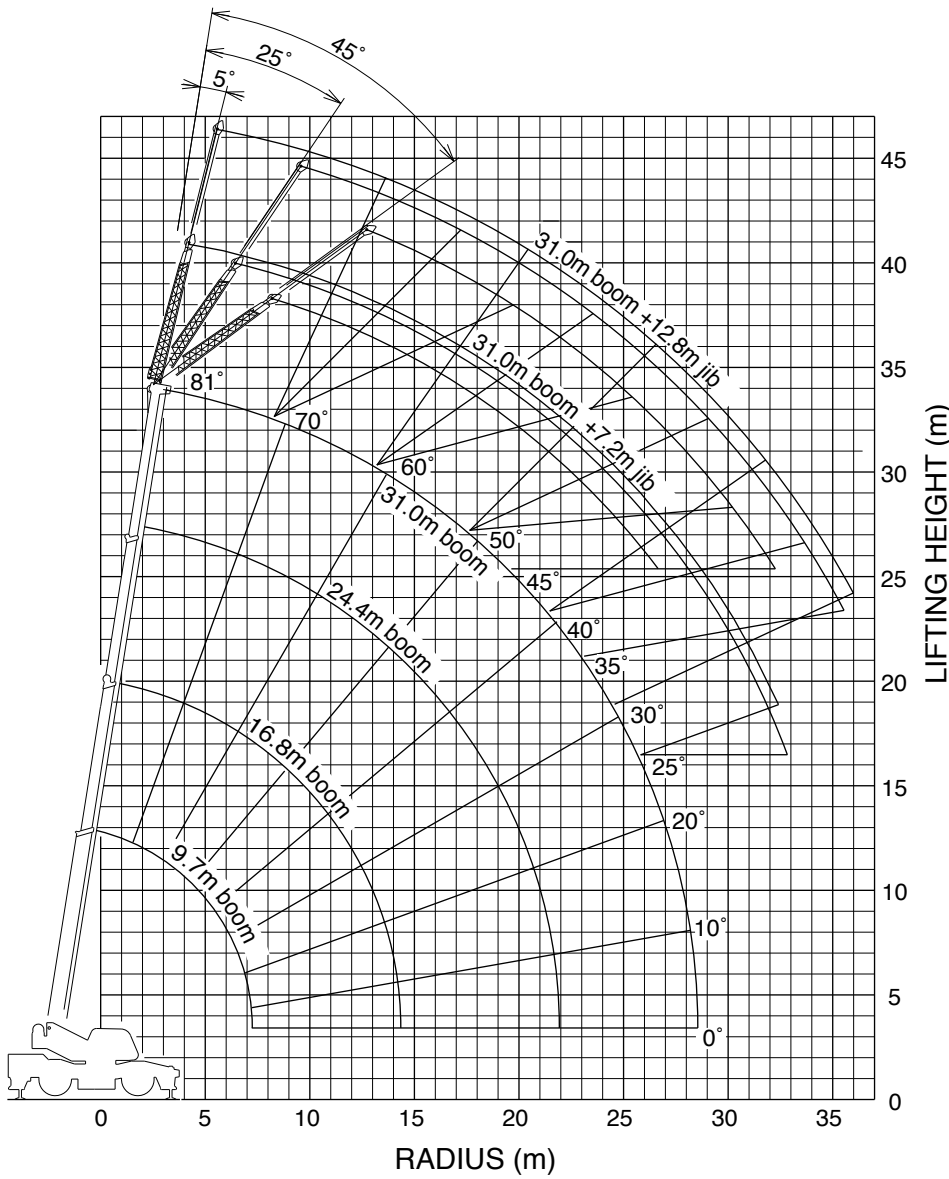
STANDARD EQUIPMENT

Automatic moment limiter (AML)
External lamp (AML)
Pendant type over-winding cutout
Winch automatic fail-safe brake
Cable follower
30 t capacity hook block (4 sheaves)
4.0 t capacity hook block (swivel hook)
Hook safety latch
Pilot check valves
Holding valves
Counterbalance valves
Hydraulic pressure relief valves
Swing brake
Swing lock
Boom angle indicator
Boom elevation foot pedal
Boom telescoping foot pedal
Outrigger extension width detector
Air conditioner (hot water heater and cooler)
Sight level gauge
Hydraulic oil cooler
Electric windshield wiper and washer
Roof window wiper and washer
Power window (Cab door)
Tachometer/Speedometer

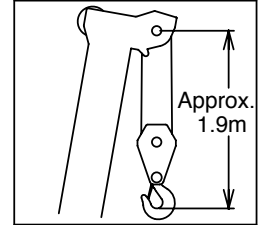
3 way adjustable cloth seat with seat belt, headrest and armrest
Cab floor mat
Sun visor (Front and roof)
Automatic drive system
Transmission neutral position engine start
Overshift prevention
Parking braked travel warning
Tilt-telescope steering wheel
Emergency steering
Back-up alarm
Air cleaner dust indicator
Air dryer
Water separator with filter
Engine over-run alarm
Hydraulic lockout suspension
Non-spin differential (Rear)
Towing eyes - front and rear
Machine data logging and monitoring system (Internet web)
Winch drum rotation indicator (Audible and visual type)
Fuel consumption monitor
Positive control

OPTIONAL EQUIPMENT

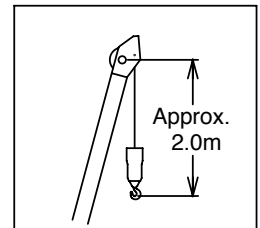
- Over-unwinding prevention
- Tire inflation kit



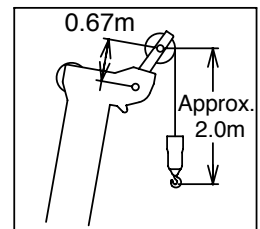
BOOM



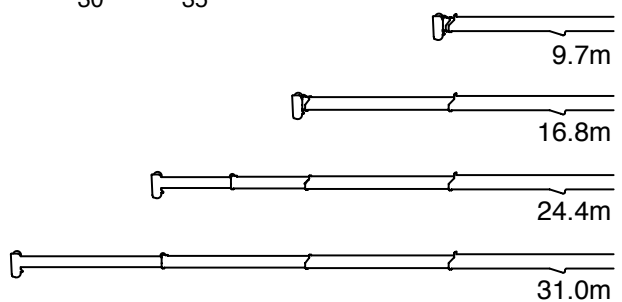
JIB



SINGLE TOP



Boom Length



NOTE: The above lifting height and boom angle are based on a straight (unladen) boom, and allowance should be made for boom deflection obtained under laden conditions. The above working range is shown on condition with outriggers fully (6.3m) extended.

ON OUTRIGGERS

| ON OUTRIGGERS FULLY EXTENDED 6.3m SPREAD 360° ROTATION (Unit: x1000kg) | | | | | | | | |
|---|---|------|------|-------|------|-------|------|-------|
| B | A | 9.7m | | 16.8m | | 24.4m | | 31.0m |
| | C | C | C | C | C | C | C | C |
| 3.0 | | 60.6 | 30.0 | 74.4 | 19.2 | 79.7 | 12.5 | |
| 3.5 | | 57.0 | 27.2 | 72.5 | 19.2 | 78.5 | 12.5 | |
| 4.0 | | 53.1 | 23.4 | 70.9 | 19.2 | 77.5 | 12.5 | 8.4 |
| 4.5 | | 49.2 | 21.3 | 68.9 | 18.3 | 76.3 | 12.5 | 8.4 |
| 5.0 | | 44.7 | 19.6 | 67.1 | 17.0 | 75.0 | 12.5 | 8.4 |
| 5.5 | | 40.3 | 18.1 | 65.1 | 15.8 | 74.0 | 12.5 | 8.4 |
| 6.0 | | 34.9 | 16.6 | 63.3 | 14.7 | 72.8 | 12.5 | 8.4 |
| 6.5 | | 28.7 | 15.2 | 61.4 | 13.6 | 71.5 | 11.7 | 8.4 |
| 7.0 | | 18.3 | 14.1 | 59.4 | 12.9 | 70.3 | 11.0 | 8.1 |
| 8.0 | | | | 54.9 | 10.9 | 67.7 | 9.75 | 7.5 |
| 9.0 | | | | 50.5 | 9.0 | 65.0 | 8.75 | 6.8 |
| 10.0 | | | | 45.8 | 7.05 | 62.4 | 7.9 | 6.2 |
| 11.0 | | | | 40.3 | 5.8 | 59.5 | 6.6 | 5.8 |
| 12.0 | | | | 34.3 | 4.8 | 56.5 | 5.6 | 5.4 |
| 13.0 | | | | 27.0 | 4.05 | 53.6 | 4.75 | 5.0 |
| 14.0 | | | | 15.7 | 3.4 | 50.4 | 4.15 | 4.4 |
| 15.0 | | | | | | 47.0 | 3.6 | 3.85 |
| 16.0 | | | | | | 43.4 | 3.2 | 3.45 |
| 17.0 | | | | | | 39.6 | 2.75 | 3.05 |
| 18.0 | | | | | | 35.5 | 2.45 | 2.65 |
| 19.0 | | | | | | 30.7 | 2.05 | 2.4 |
| 20.0 | | | | | | 25.6 | 1.8 | 2.1 |
| 22.0 | | | | | | | | 1.7 |
| 24.0 | | | | | | | | 1.3 |
| 26.0 | | | | | | | | 1.0 |
| 28.0 | | | | | | | | 0.5 |
| D | | | | | 0° | | | |

| LIFTING CAPACITIES AT ZERO DEGREE BOOM ANGLE ON OUTRIGGERS FULLY EXTENDED 6.3m SPREAD 360° ROTATION | | | | | | | | | |
|--|---|------|------|-------|-----|-------|-----|-------|-----|
| C | A | 9.7m | | 16.8m | | 24.4m | | 31.0m | |
| | B | B | B | B | B | B | B | B | |
| 0° | | 7.2 | 13.4 | 14.3 | 3.2 | 21.9 | 1.2 | 28.5 | 0.5 |

A: Boom length (m)
 B: Load radius (m)
 C: Loaded boom angle (°)

ON OUTRIGGERS

| ON OUTRIGGERS FULLY EXTENDED 6.3m SPREAD 360° ROTATION (Unit: x1000kg) | | | | | | | | | | | | | |
|---|-----------------------|------|---------|------|---------|------|------------------------|------|---------|------|---------|------|--|
| C | 31.0m Boom + 7.2m Jib | | | | | | 31.0m Boom + 12.8m Jib | | | | | | |
| | 5°Tilt | | 25°Tilt | | 45°Tilt | | 5°Tilt | | 25°Tilt | | 45°Tilt | | |
| | R | W | R | W | R | W | R | W | R | W | R | W | |
| 80° | 5.9 | 3.5 | 8.1 | 2.4 | 9.8 | 1.7 | 7.7 | 2.2 | 11.7 | 1.2 | 14.6 | 0.8 | |
| 77.5° | 7.7 | 3.5 | 9.8 | 2.3 | 11.4 | 1.65 | 9.8 | 2.15 | 13.5 | 1.15 | 16.3 | 0.78 | |
| 75° | 9.4 | 3.5 | 11.4 | 2.2 | 12.9 | 1.6 | 11.8 | 2.1 | 15.3 | 1.1 | 17.9 | 0.75 | |
| 72.5° | 11.2 | 3.23 | 13.0 | 2.1 | 14.4 | 1.55 | 13.6 | 1.93 | 17.1 | 1.05 | 19.4 | 0.73 | |
| 70° | 12.7 | 2.95 | 14.6 | 2.0 | 15.8 | 1.5 | 15.5 | 1.75 | 18.8 | 1.0 | 21.0 | 0.7 | |
| 67.5° | 14.3 | 2.75 | 16.1 | 1.93 | 17.2 | 1.45 | 17.2 | 1.63 | 20.5 | 0.95 | 22.5 | 0.68 | |
| 65° | 15.8 | 2.55 | 17.5 | 1.85 | 18.6 | 1.4 | 18.9 | 1.5 | 22.0 | 0.9 | 23.9 | 0.65 | |
| 62.5° | 17.3 | 2.35 | 19.0 | 1.8 | 19.9 | 1.38 | 20.6 | 1.4 | 23.6 | 0.88 | 25.2 | 0.65 | |
| 60° | 18.7 | 2.15 | 20.4 | 1.75 | 21.2 | 1.35 | 22.3 | 1.3 | 25.1 | 0.85 | 26.6 | 0.65 | |
| 57.5° | 20.0 | 1.95 | 21.6 | 1.65 | 22.4 | 1.33 | 23.8 | 1.23 | 26.4 | 0.8 | 27.8 | 0.65 | |
| 55° | 21.4 | 1.75 | 22.9 | 1.55 | 23.6 | 1.3 | 25.4 | 1.15 | 27.9 | 0.75 | 29.0 | 0.65 | |
| 52.5° | 22.6 | 1.55 | 24.0 | 1.38 | 24.7 | 1.23 | 26.8 | 1.1 | 29.2 | 0.73 | 30.2 | 0.63 | |
| 50° | 23.9 | 1.35 | 25.2 | 1.2 | 25.7 | 1.15 | 28.3 | 1.05 | 30.5 | 0.7 | 31.4 | 0.6 | |
| 47.5° | 25.0 | 1.18 | 26.3 | 1.1 | 26.7 | 1.1 | 29.6 | 0.9 | 31.7 | 0.68 | 32.5 | 0.6 | |
| 45° | 26.0 | 1.0 | 27.3 | 1.0 | 27.7 | 1.0 | 30.8 | 0.75 | 32.8 | 0.65 | 33.5 | 0.6 | |
| 42.5° | 27.1 | 0.9 | 28.2 | 0.9 | | | 32.0 | 0.68 | 33.8 | 0.6 | | | |
| 40° | 28.1 | 0.8 | 29.1 | 0.8 | | | 33.1 | 0.6 | 34.8 | 0.55 | | | |
| 37.5° | 29.0 | 0.7 | 30.0 | 0.7 | | | 34.2 | 0.53 | 35.7 | 0.48 | | | |
| 35° | 30.0 | 0.6 | 30.8 | 0.6 | | | 35.2 | 0.45 | 36.5 | 0.4 | | | |
| 32.5° | 30.8 | 0.53 | 31.5 | 0.53 | | | 36.1 | 0.4 | | | | | |
| 30° | 31.6 | 0.45 | 32.2 | 0.45 | | | 37.0 | 0.35 | | | | | |
| 27.5° | 32.3 | 0.4 | 32.8 | 0.38 | | | | | | | | | |
| 25° | 33.0 | 0.35 | 33.4 | 0.3 | | | | | | | | | |

C: Boom angle
 R: Load radius (m)
 W: Rated lifting capacity

ON OUTRIGGERS

| ON OUTRIGGERS MID EXTENDED 5.9m SPREAD 360° ROTATION (Unit: x1000kg) | | | | | | | | |
|---|------|------|------|-------|------|-------|------|-------|
| B | A | 9.7m | | 16.8m | | 24.4m | | 31.0m |
| | C | C | C | C | C | C | C | C |
| 3.0 | 60.6 | 30.0 | 74.4 | 19.2 | 79.7 | 12.5 | | |
| 3.5 | 57.0 | 27.2 | 72.5 | 19.2 | 78.5 | 12.5 | | |
| 4.0 | 53.1 | 23.4 | 70.9 | 19.2 | 77.5 | 12.5 | 80.8 | 8.4 |
| 4.5 | 49.2 | 21.3 | 68.9 | 18.3 | 76.3 | 12.5 | 80.0 | 8.4 |
| 5.0 | 44.7 | 19.6 | 67.1 | 17.0 | 75.0 | 12.5 | 79.1 | 8.4 |
| 5.5 | 40.3 | 18.1 | 65.1 | 15.8 | 74.0 | 12.5 | 78.3 | 8.4 |
| 6.0 | 34.9 | 16.6 | 63.3 | 14.7 | 72.8 | 12.5 | 77.3 | 8.4 |
| 6.5 | 28.7 | 15.2 | 61.4 | 13.6 | 71.5 | 11.7 | 76.6 | 8.4 |
| 7.0 | 18.3 | 12.9 | 59.4 | 12.6 | 70.3 | 11.0 | 75.6 | 8.1 |
| 8.0 | | | 54.9 | 9.65 | 67.7 | 9.75 | 73.7 | 7.5 |
| 9.0 | | | 50.5 | 7.7 | 65.0 | 8.75 | 71.8 | 6.8 |
| 10.0 | | | 45.8 | 6.25 | 62.1 | 7.05 | 69.8 | 6.2 |
| 11.0 | | | 40.3 | 5.15 | 59.4 | 5.95 | 67.6 | 5.8 |
| 12.0 | | | 34.3 | 4.2 | 56.5 | 4.95 | 65.5 | 5.3 |
| 13.0 | | | 27.0 | 3.5 | 53.4 | 4.2 | 63.2 | 4.5 |
| 14.0 | | | 15.7 | 2.9 | 50.2 | 3.55 | 61.1 | 3.85 |
| 15.0 | | | | | 46.9 | 3.05 | 58.8 | 3.35 |
| 16.0 | | | | | 43.3 | 2.6 | 56.5 | 2.85 |
| 17.0 | | | | | 39.5 | 2.25 | 54.0 | 2.5 |
| 18.0 | | | | | 35.2 | 1.85 | 51.6 | 2.2 |
| 19.0 | | | | | 30.6 | 1.6 | 49.1 | 1.85 |
| 20.0 | | | | | 25.1 | 1.35 | 46.4 | 1.6 |
| 22.0 | | | | | | | 40.4 | 1.15 |
| 24.0 | | | | | | | 33.6 | 0.8 |
| 26.0 | | | | | | | 25.6 | 0.55 |
| D | | | | | | | | 0° |

| LIFTING CAPACITIES AT ZERO DEGREE BOOM ANGLE ON OUTRIGGERS FULLY EXTENDED 5.9m SPREAD 360° ROTATION | | | | | | | | |
|--|-----|------|------|-------|------|-------|------|-------|
| C | A | 9.7m | | 16.8m | | 24.4m | | 31.0m |
| | B | B | B | B | B | B | B | B |
| 0° | 7.2 | 12.0 | 14.3 | 2.7 | 21.9 | 0.9 | 28.5 | 0.3 |

- A: Boom length (m)
- B: Load radius (m)
- C: Loaded boom angle (°)
- D: Minimum boom angle (°) for indicated boom length (no load)

ON OUTRIGGERS

| ON OUTRIGGERS MID EXTENDED 5.9m SPREAD 360° ROTATION (Unit: x1000kg) | | | | | | | | | | | | |
|---|-----------------------|------|---------|------|---------|------|------------------------|------|---------|------|---------|------|
| C | 31.0m Boom + 7.2m Jib | | | | | | 31.0m Boom + 12.8m Jib | | | | | |
| | 5°Tilt | | 25°Tilt | | 45°Tilt | | 5°Tilt | | 25°Tilt | | 45°Tilt | |
| | R | W | R | W | R | W | R | W | R | W | R | W |
| 80° | 5.9 | 3.5 | 8.1 | 2.4 | 9.8 | 1.7 | 7.7 | 2.2 | 11.7 | 1.2 | 14.6 | 0.8 |
| 77.5° | 7.7 | 3.5 | 9.8 | 2.3 | 11.4 | 1.65 | 9.8 | 2.15 | 13.5 | 1.15 | 16.3 | 0.78 |
| 75° | 9.4 | 3.5 | 11.4 | 2.2 | 12.9 | 1.6 | 11.8 | 2.1 | 15.3 | 1.1 | 17.9 | 0.75 |
| 72.5° | 11.2 | 3.23 | 13.0 | 2.1 | 14.4 | 1.55 | 13.6 | 1.93 | 17.1 | 1.05 | 19.4 | 0.73 |
| 70° | 12.7 | 2.95 | 14.6 | 2.0 | 15.8 | 1.5 | 15.5 | 1.75 | 18.8 | 1.0 | 21.0 | 0.7 |
| 67.5° | 14.3 | 2.75 | 16.1 | 1.93 | 17.2 | 1.45 | 17.2 | 1.63 | 20.5 | 0.95 | 22.5 | 0.68 |
| 65° | 15.8 | 2.55 | 17.5 | 1.85 | 18.6 | 1.4 | 18.9 | 1.5 | 22.0 | 0.9 | 23.9 | 0.65 |
| 62.5° | 17.3 | 2.35 | 19.0 | 1.8 | 19.9 | 1.38 | 20.6 | 1.4 | 23.6 | 0.88 | 25.2 | 0.65 |
| 60° | 18.7 | 2.15 | 20.4 | 1.75 | 21.2 | 1.35 | 22.3 | 1.3 | 25.1 | 0.85 | 26.6 | 0.65 |
| 57.5° | 20.0 | 1.88 | 21.6 | 1.6 | 22.4 | 1.33 | 23.8 | 1.23 | 26.4 | 0.8 | 27.8 | 0.65 |
| 55° | 21.4 | 1.6 | 22.9 | 1.45 | 23.6 | 1.3 | 25.4 | 1.15 | 27.9 | 0.75 | 29.0 | 0.65 |
| 52.5° | 22.6 | 1.35 | 24.0 | 1.25 | 24.7 | 1.15 | 26.8 | 1.0 | 29.2 | 0.73 | 30.2 | 0.63 |
| 50° | 23.9 | 1.1 | 25.1 | 1.05 | 25.7 | 1.0 | 28.2 | 0.85 | 30.4 | 0.7 | 31.3 | 0.6 |
| 47.5° | 25.0 | 0.95 | 26.1 | 0.9 | 26.7 | 0.88 | 29.5 | 0.73 | 31.6 | 0.63 | 32.3 | 0.55 |
| 45° | 26.0 | 0.8 | 27.1 | 0.75 | 27.7 | 0.75 | 30.7 | 0.6 | 32.7 | 0.55 | 33.3 | 0.5 |
| 42.5° | 27.1 | 0.68 | 28.1 | 0.63 | | | 31.9 | 0.48 | 33.7 | 0.45 | | |
| 40° | 28.1 | 0.55 | 29.0 | 0.5 | | | 33.1 | 0.35 | 34.7 | 0.35 | | |
| 37.5° | 29.0 | 0.48 | 29.8 | 0.43 | | | | | | | | |
| 35° | 30.0 | 0.4 | 30.7 | 0.35 | | | | | | | | |

- C: Boom angle (°)
- R: Load radius (m)
- W: Rated lifting capacity

ON OUTRIGGERS

| ON OUTRIGGERS MID EXTENDED 5.0m SPREAD 360° ROTATION (Unit: ×1000kg) | | | | | | | | |
|---|------|------|------|-------|------|-------|------|-------|
| B | A | 9.7m | | 16.8m | | 24.4m | | 31.0m |
| | C | C | C | C | C | C | C | C |
| 3.0 | 60.6 | 30.0 | 74.4 | 19.2 | 79.7 | 12.5 | | |
| 3.5 | 57.0 | 27.2 | 72.5 | 19.2 | 78.5 | 12.5 | | |
| 4.0 | 53.1 | 23.4 | 70.9 | 19.2 | 77.5 | 12.5 | 80.8 | 8.4 |
| 4.5 | 49.2 | 21.3 | 68.9 | 18.3 | 76.3 | 12.5 | 80.0 | 8.4 |
| 5.0 | 44.7 | 19.6 | 67.1 | 17.0 | 75.0 | 12.5 | 79.1 | 8.4 |
| 5.5 | 40.3 | 15.7 | 65.1 | 15.0 | 74.0 | 12.5 | 78.3 | 8.4 |
| 6.0 | 34.9 | 13.2 | 63.3 | 12.65 | 72.8 | 12.5 | 77.3 | 8.4 |
| 6.5 | 28.7 | 11.3 | 61.4 | 10.85 | 71.5 | 11.7 | 76.6 | 8.4 |
| 7.0 | 18.2 | 9.65 | 59.4 | 9.5 | 70.1 | 10.4 | 75.6 | 8.1 |
| 8.0 | | | 54.9 | 7.3 | 67.5 | 8.2 | 73.7 | 7.5 |
| 9.0 | | | 50.5 | 5.8 | 64.8 | 6.7 | 71.8 | 6.8 |
| 10.0 | | | 45.8 | 4.7 | 62.0 | 5.5 | 69.5 | 5.8 |
| 11.0 | | | 40.3 | 3.8 | 59.3 | 4.65 | 67.3 | 4.9 |
| 12.0 | | | 34.3 | 3.1 | 56.3 | 3.9 | 65.2 | 4.25 |
| 13.0 | | | 27.0 | 2.55 | 53.0 | 3.25 | 63.0 | 3.6 |
| 14.0 | | | 15.7 | 1.9 | 49.9 | 2.75 | 60.8 | 3.1 |
| 15.0 | | | | | 46.6 | 2.3 | 58.5 | 2.65 |
| 16.0 | | | | | 43.0 | 1.9 | 56.1 | 2.25 |
| 17.0 | | | | | 39.4 | 1.6 | 53.8 | 1.95 |
| 18.0 | | | | | 35.2 | 1.35 | 51.3 | 1.65 |
| 19.0 | | | | | 30.5 | 1.1 | 48.7 | 1.4 |
| 20.0 | | | | | 24.9 | 0.75 | 46.0 | 1.2 |
| 22.0 | | | | | | | 40.3 | 0.8 |
| D | | | | 0° | | | | 26° |

| LIFTING CAPACITIES AT ZERO DEGREE BOOM ANGLE ON OUTRIGGERS FULLY EXTENDED 5.0m SPREAD 360° ROTATION | | | | | | | |
|--|-----|------|------|-------|------|-------|---|
| C | A | 9.7m | | 16.8m | | 24.4m | |
| | B | B | B | B | B | B | B |
| 0° | 7.2 | 9.0 | 14.3 | 1.8 | 21.9 | 0.5 | |

- A: Boom length (m)
- B: Load radius (m)
- C: Loaded boom angle
- D: Minimum boom angle (°) for indicated boom length (no load)

ON OUTRIGGERS

| ON OUTRIGGERS MID EXTENDED 5.0m SPREA 360° ROTATION (Unit: ×1000kg) | | | | | | | | | | | | |
|--|-----------------------|------|---------|------|---------|------|------------------------|------|---------|------|---------|------|
| C | 31.0m Boom + 7.2m Jib | | | | | | 31.0m Boom + 12.8m Jib | | | | | |
| | 5°Tilt | | 25°Tilt | | 45°Tilt | | 5°Tilt | | 25°Tilt | | 45°Tilt | |
| | R | W | R | W | R | W | R | W | R | W | R | W |
| 80° | 5.9 | 3.5 | 8.1 | 2.4 | 9.8 | 1.7 | 7.7 | 2.2 | 11.7 | 1.2 | 14.6 | 0.8 |
| 77.5° | 7.7 | 3.5 | 9.8 | 2.3 | 11.4 | 1.65 | 9.8 | 2.15 | 13.5 | 1.15 | 16.3 | 0.78 |
| 75° | 9.4 | 3.5 | 11.4 | 2.2 | 12.9 | 1.6 | 11.8 | 2.1 | 15.3 | 1.1 | 17.9 | 0.75 |
| 72.5° | 11.2 | 3.23 | 13.0 | 2.1 | 14.4 | 1.55 | 13.6 | 1.93 | 17.1 | 1.05 | 19.4 | 0.73 |
| 70° | 12.7 | 2.95 | 14.6 | 2.0 | 15.8 | 1.5 | 15.5 | 1.75 | 18.8 | 1.0 | 21.0 | 0.7 |
| 67.5° | 14.3 | 2.7 | 16.1 | 1.93 | 17.2 | 1.45 | 17.2 | 1.63 | 20.5 | 0.95 | 22.5 | 0.68 |
| 65° | 15.8 | 2.45 | 17.5 | 1.85 | 18.6 | 1.4 | 18.9 | 1.5 | 22.0 | 0.9 | 23.9 | 0.65 |
| 62.5° | 17.1 | 2.05 | 18.9 | 1.65 | 19.9 | 1.38 | 20.6 | 1.38 | 23.6 | 0.88 | 25.2 | 0.65 |
| 60° | 18.6 | 1.65 | 20.2 | 1.45 | 21.1 | 1.35 | 22.2 | 1.25 | 25.1 | 0.85 | 26.6 | 0.65 |
| 57.5° | 19.8 | 1.38 | 21.5 | 1.23 | 22.3 | 1.15 | 23.7 | 1.03 | 26.5 | 0.75 | 27.8 | 0.65 |
| 55° | 21.1 | 1.1 | 22.7 | 1.0 | 23.4 | 0.95 | 25.1 | 0.8 | 27.7 | 0.65 | 29.0 | 0.65 |
| 52.5° | 22.4 | 0.93 | 23.9 | 0.83 | 24.5 | 0.8 | 26.5 | 0.65 | 29.0 | 0.55 | 30.2 | 0.55 |
| 50° | 23.6 | 0.75 | 25.0 | 0.65 | 25.5 | 0.65 | 27.9 | 0.5 | 30.3 | 0.45 | 31.2 | 0.45 |
| 47.5° | 24.8 | 0.6 | 26.1 | 0.5 | 26.6 | 0.5 | | | | | | |
| 45° | 25.9 | 0.45 | 27.1 | 0.35 | 27.5 | 0.35 | | | | | | |

- C: Boom angle (°)
- R: Load radius (m)
- W :Rated lifting capacity (Unit:×1000kg)

ON OUTRIGGERS

| ON OUTRIGGERS MIN EXTENDED 2.2m SPREAD 360° ROTATION (Unit: x1000kg) | | | | | | | | |
|---|------|-------|-------|------|-------|------|-------|------|
| B \ A | 9.7m | | 16.8m | | 24.4m | | 31.0m | |
| | C | C | C | C | C | C | C | C |
| 3.0 | 60.6 | 13.2 | 74.2 | 13.0 | 79.5 | 12.5 | | |
| 3.5 | 57.0 | 10.25 | 72.2 | 9.8 | 78.4 | 10.9 | | |
| 4.0 | 53.1 | 8.0 | 70.5 | 7.8 | 77.2 | 8.8 | 79.9 | 8.0 |
| 4.5 | 49.2 | 6.7 | 68.4 | 6.45 | 75.9 | 7.25 | 79.0 | 7.2 |
| 5.0 | 44.7 | 5.7 | 66.8 | 5.3 | 74.6 | 6.2 | 77.9 | 6.05 |
| 5.5 | 40.3 | 4.7 | 64.6 | 4.4 | 73.3 | 5.2 | 77.0 | 5.45 |
| 6.0 | 34.9 | 3.85 | 62.8 | 3.65 | 72.0 | 4.4 | 76.1 | 4.8 |
| 6.5 | 28.7 | 3.3 | 60.9 | 3.05 | 70.6 | 3.8 | 75.1 | 4.25 |
| 7.0 | 18.3 | 2.7 | 58.7 | 2.6 | 69.5 | 3.3 | 74.1 | 3.65 |
| 8.0 | | | 54.6 | 1.85 | 66.7 | 2.4 | 72.3 | 2.75 |
| 9.0 | | | 50.2 | 1.2 | 64.1 | 1.75 | 70.3 | 2.05 |
| 10.0 | | | 45.1 | 0.55 | 61.3 | 1.35 | 68.3 | 1.5 |
| 11.0 | | | | | 58.7 | 0.95 | 66.2 | 1.2 |
| 12.0 | | | | | 55.9 | 0.55 | 64.3 | 0.9 |
| 13.0 | | | | | | | 62.2 | 0.5 |
| D | 0° | | 40° | | 53° | | 60° | |

| LIFTING CAPACITIES AT ZERO DEGREE BOOM ANGLE ON OUTRIGGERS MIN EXTENDED 2.2m SPREAD 360° ROTATION | | | | | | | | |
|--|------|-----|--|--|--|--|--|--|
| C \ A | 9.7m | | | | | | | |
| | B | B | | | | | | |
| 0° | 7.2 | 2.5 | | | | | | |

- A: Boom length (m)
- B: Load radius (m)
- C: Loaded boom angle (°)
- D: Minimum boom angle (°) for indicated boom length (no load)

NOTES FOR “ON OUTRIGGERS” TABLE

1. Rated lifting capacities shown in the table are based on condition that crane is set on firm level surface. Those above thick lines are based on crane strength and those below, on its stability.
2. Rated lifting capacities based on crane stability are according to ISO 4305.
3. The mass of the hook (270kg for 30 t capacity, 100kg for 4.0 t capacity), slings and all similarly used load handling devices must be considered as part of the load and must be deducted from the lifting capacities.
4. For rated lifting capacity of single top, reduce the rated lifting capacities of relevant boom according to a weight reduction for auxiliary load handling equipment. Capacities of single top shall not exceed 4,000 kg including main boom hook mass and the net capacity must be so reduced.
5. Standard number of parts of line for each boom length is as shown below. Load per line should not surpass 39.2 kN {4,000 kg} for main winch and auxiliary winch.

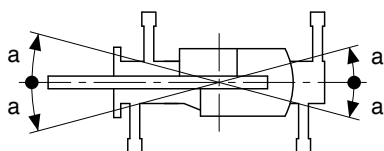
| Boom length | 9.7m | 9.7m to 16.8m | 16.8m to 31.0m | Single top / Jib |
|-------------------------|------|---------------|----------------|------------------|
| Number of parts of line | 8 | 6 | 4 | 1 |

The lifting capacity data stored in the AUTOMATIC MOMENT LIMITER (AML-L) is based on the standard number of parts of line listed in the chart.

Maximum lifting capacity is restricted by the number of parts of line of AUTOMATIC MOMENT LIMITER (AML-L).

6. The lifting capacity for over-side area differs depending on the outrigger extension width. Work with the capacity corresponding to the extension width. The lifting capacities for over-front and over-rear areas are for “outriggers fully extended”. However, the areas (angle a) differ depending on the outrigger extension width.

| Outriggers extended width | 5.9m(middle) | 5.0m(middle) | 2.2m(minimum) |
|---------------------------|--------------|--------------|---------------|
| Angle a° | 45 | 40 | 15 |



RATED LIFTING CAPACITIES ISO4305

SPEC. SHEET NO. GR-300E-2-00102/EX-01

| ON RUBBER STATIONARY (Unit: ×1000kg) | | | | | | | | | | | | |
|--------------------------------------|------------|------|-------|------|-------|------|---------------|------|-------|------|-------|-----|
| B \ A | Over Front | | | | | | 360° Rotation | | | | | |
| | 9.7m | | 16.8m | | 24.4m | | 9.7m | | 16.8m | | 24.4m | |
| | C | | C | | C | | C | | C | | C | |
| 3.0 | 60.6 | 18.0 | | | | | 60.6 | 11.0 | | | | |
| 3.5 | 56.8 | 17.0 | | | | | 57.1 | 9.0 | | | | |
| 4.0 | 53.0 | 15.0 | | | | | 53.5 | 7.3 | | | | |
| 4.5 | 49.2 | 12.7 | 68.8 | 11.0 | | | 49.7 | 5.7 | 68.5 | 5.5 | | |
| 5.0 | 44.9 | 10.6 | 66.9 | 9.5 | | | 45.4 | 4.9 | 66.3 | 4.5 | | |
| 5.5 | 39.9 | 9.0 | 64.9 | 8.0 | | | 40.8 | 4.0 | 64.6 | 3.7 | | |
| 6.0 | 34.6 | 7.7 | 63.1 | 7.0 | | | 35.3 | 3.2 | 62.5 | 3.1 | | |
| 6.5 | 27.7 | 6.6 | 61.1 | 6.1 | | | 28.9 | 2.75 | 60.9 | 2.5 | | |
| 7.0 | 17.7 | 5.7 | 59.0 | 5.3 | | | 20.5 | 2.27 | 58.6 | 2.1 | | |
| 8.0 | | | 54.6 | 4.25 | 67.2 | 5.0 | | | 54.6 | 1.4 | 66.9 | 2.2 |
| 9.0 | | | 50.0 | 3.45 | 64.3 | 3.9 | | | 49.9 | 0.85 | 64.3 | 1.6 |
| 10.0 | | | 45.2 | 2.65 | 61.6 | 3.15 | | | | | 61.6 | 1.1 |
| 11.0 | | | 40.1 | 2.1 | 58.8 | 2.55 | | | | | 58.7 | 0.8 |
| 12.0 | | | 33.8 | 1.6 | 55.9 | 2.1 | | | | | | |
| 13.0 | | | 26.5 | 1.2 | 52.9 | 1.75 | | | | | | |
| 14.0 | | | 15.7 | 0.75 | 49.7 | 1.4 | | | | | | |
| 15.0 | | | | | 46.7 | 1.1 | | | | | | |
| 16.0 | | | | | 43.1 | 0.85 | | | | | | |
| 17.0 | | | | | 39.4 | 0.6 | | | | | | |
| D | | | | | | | | | | | | |
| | | | | 0° | | 28° | | 0° | | 44° | | 56° |

| LIFTING CAPACITIES AT ZERO DEGREE BOOM ANGLE ON RUBBER STATIONARY | | | | | | | | | | | |
|--|------------|-----|-------|-----|--|--|---------------|-----|--|--|--|
| C \ A | Over Front | | | | | | 360° Rotation | | | | |
| | 9.7m | | 16.8m | | | | 9.7m | | | | |
| | B | | B | | | | B | | | | |
| 0° | 7.2 | 5.4 | 14.3 | 0.7 | | | 7.2 | 2.1 | | | |

- A: Boom length (m)
- B: Load radius (m)
- C: Loaded boom angle (°)
- D: Minimum boom angle (°) for indicated boom length (no load)

| ON RUBBER CREEP (Unit: ×1000kg) | | | | | | | | | | | | |
|---------------------------------|------------|-------|-------|------|-------|------|---------------|------|-------|------|-------|------|
| B \ A | Over Front | | | | | | 360° Rotation | | | | | |
| | 9.7m | | 16.8m | | 24.4m | | 9.7m | | 16.8m | | 24.4m | |
| | C | | C | | C | | C | | C | | C | |
| 3.0 | 60.6 | 18.0 | | | | | 60.6 | 10.0 | | | | |
| 3.5 | 56.8 | 15.45 | | | | | 57.0 | 8.0 | | | | |
| 4.0 | 53.0 | 13.0 | | | | | 53.3 | 6.5 | | | | |
| 4.5 | 49.0 | 11.1 | 68.6 | 9.7 | | | 49.2 | 5.1 | 68.6 | 5.1 | | |
| 5.0 | 44.7 | 9.3 | 66.6 | 8.4 | | | 44.4 | 4.3 | 66.6 | 4.2 | | |
| 5.5 | 39.8 | 7.95 | 64.6 | 7.0 | | | 39.6 | 3.7 | 64.7 | 3.5 | | |
| 6.0 | 34.7 | 6.7 | 62.8 | 6.0 | | | 34.0 | 3.0 | 62.7 | 2.7 | | |
| 6.5 | 28.0 | 5.75 | 60.8 | 5.3 | | | 27.0 | 2.5 | 60.7 | 2.35 | | |
| 7.0 | 18.2 | 5.0 | 58.7 | 4.65 | | | 18.1 | 1.95 | 58.9 | 1.85 | | |
| 8.0 | | | 54.4 | 3.6 | 67.0 | 4.3 | | | 54.5 | 1.3 | 67.0 | 1.9 |
| 9.0 | | | 49.9 | 2.8 | 64.3 | 3.4 | | | 50.2 | 0.75 | 64.3 | 1.35 |
| 10.0 | | | 45.1 | 2.3 | 61.7 | 2.8 | | | | | 61.7 | 0.9 |
| 11.0 | | | 39.6 | 1.8 | 58.8 | 2.25 | | | | | 58.8 | 0.6 |
| 12.0 | | | 33.3 | 1.35 | 56.0 | 1.8 | | | | | | |
| 13.0 | | | 26.0 | 1.0 | 52.9 | 1.5 | | | | | | |
| 14.0 | | | 14.6 | 0.6 | 49.7 | 1.2 | | | | | | |
| 15.0 | | | | | 46.4 | 0.95 | | | | | | |
| 16.0 | | | | | 42.9 | 0.6 | | | | | | |
| D | | | | | | | | | | | | |
| | | | | 0° | | 31° | | 0° | | 44° | | 56° |

| LIFTING CAPACITIES AT ZERO DEGREE BOOM ANGLE ON RUBBER CREEP | | | | | | | | | | | |
|---|------------|-----|-------|-----|--|--|---------------|-----|--|--|--|
| C \ A | Over Front | | | | | | 360° Rotation | | | | |
| | 9.7m | | 16.8m | | | | 9.7m | | | | |
| | B | | B | | | | B | | | | |
| 0° | 7.2 | 4.7 | 14.3 | 0.5 | | | 7.2 | 1.8 | | | |

- A: Boom length (m)
- B: Load radius (m)
- C: Loaded boom angle (°)
- D: Minimum boom angle (°) for indicated boom length (no load)

NOTES FOR "ON TIRES" TABLE

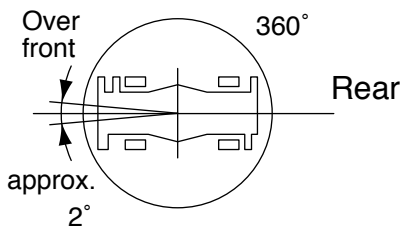
1. Rated lifting capacities shown in the table are based on condition that crane is set on firm level surface, with suspension lock applied. Those above thick lines are based on tire capacity and those below, on crane stability. They are based on actual load radius increased by tire deformation and boom deflection.
2. Rated lifting capacities based on crane stability are according to ISO 4305.
3. The mass of the hook (270 kg for 30 t capacity, 100 kg for 4.0 t capacity), slings and all similarly used load handling devices must deducted from the lifting capacities.
4. For rated lifting capacity of single top, reduce the rated lifting capacities of relevant boom according to weight reductions for auxiliary load handling equipment. Capacities of single top shall not exceed 4,000 kg including main hook.
5. On rubber lifting with "jib" is not permitted. Maximum permissible boom length is 24.4 m.
6. CREEP is motion for crane not to travel more than 60 m in any 30 minute period and to travel at the speed of less than 1.6 km/h.
7. During "CREEP" duties travel slowly and keep the lifting load as close to the ground as possible, and especially avoid any abrupt steering, accelerating or braking.
8. Do not operate the crane while carrying the load.
9. Tires should be inflated to their correct air pressure of 900kPa.
10. For CREEP operation, choose the drive mode and proper gear according to the road or working condition.
11. Standard number of parts of line for on rubber operation should be according to the following table.
Load per line should not surpass 39.2kN {4,000kgf} for main winch and auxiliary winch.

| | | | |
|-------------------------|------|---------------|------------|
| Boom length | 9.7m | 9.7m to 24.4m | Single top |
| Number of parts of line | 6 | 4 | 1 |

The lifting capacity data stored in the AUTOMATIC MOMENT LIMITER (AML) is based on the standard number of parts of line listed in the chart.

Maximum lifting capacity is restricted by the number of parts of line of AUTOMATIC MOMENT LIMITER (AML).

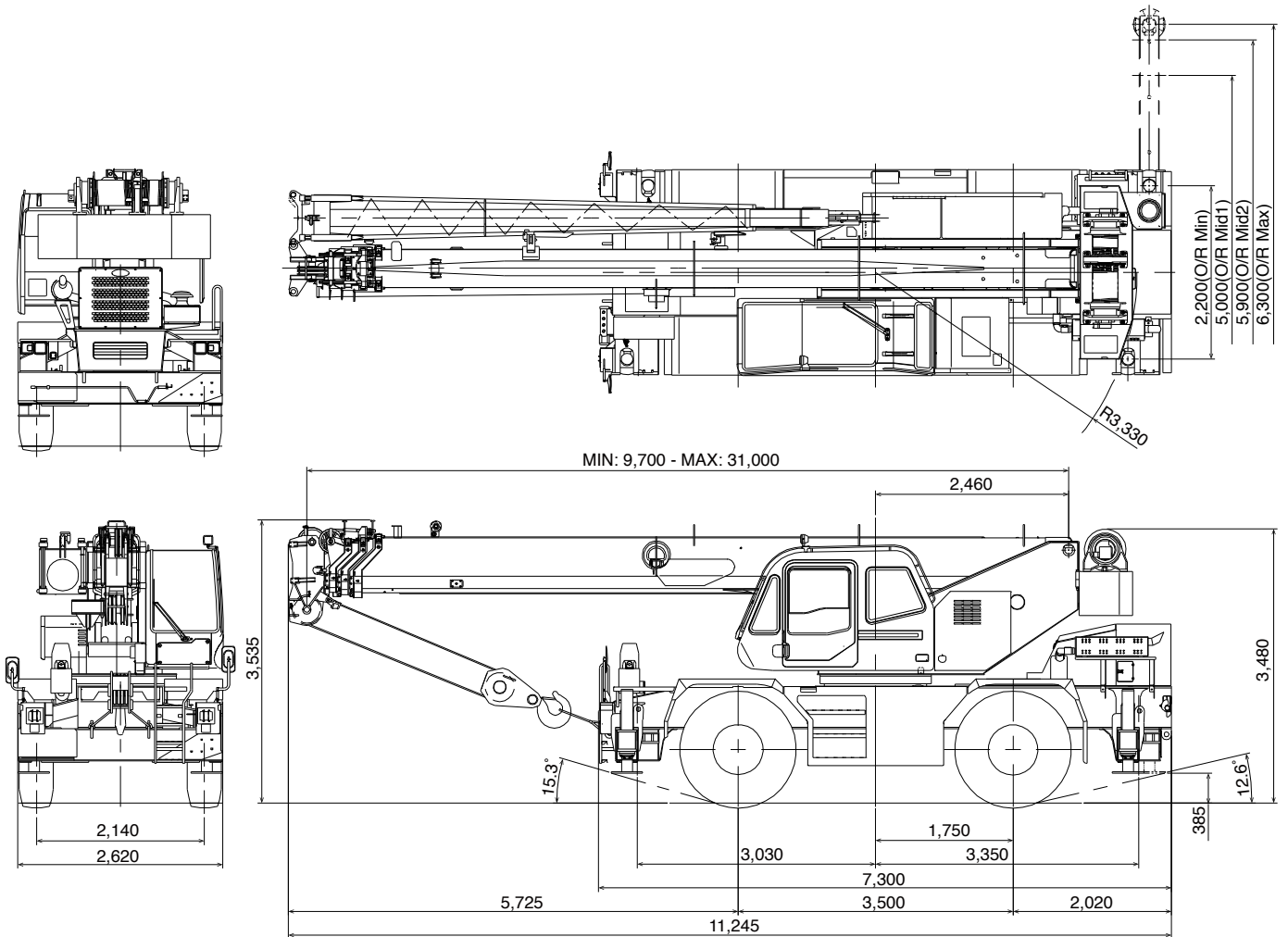
WORKING AREA



Without outriggers "Over front" operation should be performed within 2 degrees in front of chassis.

DIMENSION

SPEC. SHEET NO. GR-300E-2-00102/EX-01



Note: Dimension is with boom angle at 0 degree.

Axle Weight Distribution Chart

Unit : kg

| | GVW | Front | Rear |
|--|--------------|----------------|-------------|
| Basic standard machine includes: 4-section boom (9.7 m - 31.0 m) 2-stage jib (7.2 m, 12.8 m) Cummins QSB6.7 445 / 95R 25 tires Single top 4.0 ton hook block | 26,920 | 13,170 | 13,750 |
| Add: 1. 30ton 4 sheaves hook block | +270 | +480 | -210 |
| Remove: 1. 2-stage jib (7.2 m, 12.8 m) 2. 4.0ton hook block | -630 -100 | -1,085 -140 | +455 +40 |

Specifications are subject to change without notice.




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
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