

# ROUGH TERRAIN CRANE

**GR-600N**

## *JAPANESE SPECIFICATIONS*

OUTLINE	SPEC. NO.
6-section Boom, 2-stage Fully Automatic Jib, H-type Outriggers	GR-600N-2-00101

Control No. JA-01

# GR-600N

## 1. Crane Specifications

### ☉ Crane

#### Crane Capacity

9.8 m boom	60,000 kg	x 2.8 m	(14-part line)
16.6 m boom	32,000 kg	x 5.5 m	(8-part line)
23.5 m boom	24,000 kg	x 5.5 m	(6-part line)
30.3 m boom	12,500 kg	x 10.0 m	(4-part line)
37.2 m boom	12,000 kg	x 10.0 m	(4-part line)
41.2 m boom	10,000 kg	x 11.0 m	(4-part line)
44.0 m boom	8,000 kg	x 12.0 m	(4-part line)
8.0 m jib	4,000 kg	x 76°	(single-part line)
12.7 m jib	2,600 kg	x 74°	(single-part line)
Single top	5,000 kg		(single-part line)

#### Max. Lifting Height

Boom	45.2 m
Jib	58.0 m

#### Max. Working Radius

Boom	36.0 m (standard performance), 40.0 m (over-front special performance)
Jib	40.2 m (standard performance), 47.5 m (over-front special performance)

#### Boom Length

9.8 m to 44.0m

#### Boom Extension

34.2 m

#### Boom Extension Speed

34.2 m/134 s

#### Jib Length

8.0 m to 12.7 m

#### Main Winch Single Line Winding Speed

125 m/min (5 layers)

#### Main Winch Hook Speed

8.9 m/min (14-part line)

#### Main Winch Single Line Unwinding Speed

<Reference>

Standard: 125 m/min (5 layers)

High-speed: 190 m/min (5 layers)

#### Auxiliary Winch Single Line Winding Speed

110m/min (3 layers)

#### Auxiliary Winch Hook Speed

110m/min (single-part line)

#### Auxiliary Winch Single Line Unwinding Speed

<Reference>

Standard: 110 m/min (3 layers)

High-speed: 165 m/min (3 layers)

#### Boom Elevation Angle

0° to 84.0°

#### Boom ElevationSpeed

0° to 84.0°/62 s

#### Swing Angle

360° continuous

#### Swing Speed

2.1 min<sup>-1</sup> (rpm)

#### Wire Rope

Main winch	18 mm dia. x 238 m long Spin-resistant wire rope
Auxiliary winch	18 mm dia. x 123 mm long Spin-resistant wire rope

#### Boom

6-section hydraulically telescoping boom of hexagonal box construction  
(stages 2, 3: synchronized, stages 4, 5, 6: synchronized)

#### Boom Extension

3 double-acting hydraulic cylinders  
2 wire rope-type telescoping devices

### Jib

Quick-turn type (stored alongside and below boom)  
2-stage (hydraulically telescoping 2nd stage)  
Hydraulic non-stage inclined offset (5° to 60°) type

#### Single Top

Fixed on top boom section

#### Hoist

Hydraulic motor driven planetary gear reducer  
Automatic brake  
High-speed unwind function  
2 single winches  
With flow regulator valve with pressure compensation

#### Boom Elevation

2 double-acting hydraulic cylinders  
With flow regulator valve with pressure compensation

#### Swing

Hydraulic motor driven planetary gear reducer  
Swing bearing  
Swing free/lock changeover type  
Negative brake

#### Outriggers

Fully hydraulic H-type (floats mounted integrally)  
Slides and jacks each provided with independent operation device.

Extended width	Maximum 7.6 m
Middle extended width	7.2 m, 5.28 m, 4.28 m
Minimum extended width	2.36 m

#### Operation Method

Hydraulic pilot valve operation

#### Max. Vertical Load Capacity of Outrigger

42.6 t

#### Power Take-Off

PTO wet multi-plate clutch

#### Hydraulic Pumps

2 variable piston pumps  
3 gear pumps

#### Hydraulic Tank Capacity

620 L

#### Safety Devices

Automatic moment limiter (AML)  
Swing automatic stop device  
Elevation slow down and stop device  
Over-winding cutout device  
Working area control device  
Outrigger extension width detector  
Level gauge  
Hook safety latch  
Hydraulic safety valve  
Telescoping cylinder check valve  
Extension cylinder check valve  
Jib telescoping cylinder check valve  
Power tilt counterbalance valve  
Jack pilot check valve  
Swing lock

#### Equipment

Air-conditioner with dehumidifier  
Hydraulic oil temperature indication lamp  
Radio  
Oil cooler  
Visual-type winch drum rotation indicator  
Operation pedals  
ISO arrangement: for telescoping/auxiliary hoisting  
Tadano arrangement: for elevating/telescoping  
Satellite Communications Equipment (HELLO-NET Owner's Site)  
**Ancillary Equipment**  
Wood blocks (x 4)

Aluminum deck plates (x 4)

## ☉ Carrier

### Manufacturer and Model

Tadano JDS-T004

### Engine

Model Nissan GE13C-06  
(with turbo and air cooler)

Type Water-cooled 4-cycle, in-line 6 cylinder, direct-injection diesel

Piston displacement 13.074 L

Max. output 275 kw (374PS)/1,800 min<sup>-1</sup> (rpm) underway

Max. torque 1,495 N.m (152 kgf.m)/1,200 min<sup>-1</sup> (rpm)

### Torque Converter

3-element, 1-stage unit (with automatic lock-up mechanism)

### Transmission

Automatic and manual transmission

Power shift type (wet multi-plate clutch)

4 forward gears, 1 reverse gear (with Hi and Lo)

### Reducer

Axle dual-ratio reduction (2nd, 3rd, 4th axles)

### Drive

Rear 4-wheel drive (8 x 4)/6-wheel drive (8 x 6) selection

### Axle (all axles)

Full floating type

### Suspension (all axles)

Hydro-pneumatic suspension (with hydraulic lock cylinder)

### Steering

Fully hydraulic power steering

### Brake System

Service Brake Hydro-pneumatic disk brake

Parking Brake Mechanically operated, internal expanding duo-servo shoe type acting on drum at transmission case rear (2nd and 4th axles)

Auxiliary Brake Hydrodynamic retarder  
Electro-pneumatic operated exhaust brake  
Auxiliary braking device for operations

### Frame

Welded box-shaped structure

### Electric System

12 V/120 Ah x 2 (24 V)

### Fuel Tank Capacity

400 L

### Tires

Front 385/95R25 170E Road

Rear 385/95R25 170E Road

### Cab

One-man type

With interior equipment

Sealed-fluid rubber mounted type

Fully adjustable folding seat

(with head rest, arm rest, seat belt)

Adjustable wheel (tilt, telescoping)

Intermittent windshield/roof wiper (with washer)

Power window

Side visor

### Safety Devices

Emergency steering device

Suspension lock device

Rear wheel steering lock device

Engine over-run alarm

Overshift prevention device

Parking brake alarm

Monitor television on left and right sides of boom

### Equipment

Centralized oiling device

Electric mirror

## ☉ Dimensions

Overall length	12,815 mm
Overall width	2,780 mm
Overall height	3,750 mm
Wheel base	1,500 m, 4,000 m, 1,500 m
Tread Front	2,330 mm
Rear	2,330 mm

## ☉ Weights

Gross vehicle weight	41,295 kg
Front-front axle load	10,140 kg
Front-rear axle load	10,380 kg
Rear-front axle load	10,430 kg
Rear-rear axle load	10,345 kg

## ☉ Performance

Max. traveling speed	49 km/h
Gradeability (tanθ)	0.46
Min. turning radius	7.55 m (8-wheel steering) 11.5 m (front 4-wheel steering)

## ☉ Optional equipment

Winch drum monitoring camera  
Rear view monitoring camera  
Loudspeaker  
AML external warning lamp  
Roadside lamp  
Identification lamp

\* This crane has a compliance certificate ('Weight under basic transit conditions: D') under the new vehicle certification system, however in practice, conditions imposed for transit are in accordance with the assessment of each route by the road controller.

## 2. Total Rated Loads

### 2-(1) Outrigger Used Standard Performance [Boom]

Unit: ton

		Outriggers fully extended (7.6 m)					-360°-		
Working radius	Boom length	9.8 m	16.6 m	23.5 m	30.3 m	37.2 m	41.2 m	44.0 m	
2.8 m		60.0	32.0	24.0	12.5				
3.0 m		56.5	32.0	24.0	12.5				
3.5 m		51.9	32.0	24.0	12.5	12.0			
4.0 m		48.6	32.0	24.0	12.5	12.0	10.0		
4.5 m		44.3	32.0	24.0	12.5	12.0	10.0	8.0	
5.0 m		39.5	32.0	24.0	12.5	12.0	10.0	8.0	
5.5 m		35.7	32.0	24.0	12.5	12.0	10.0	8.0	
6.0 m		32.5	31.3	22.9	12.5	12.0	10.0	8.0	
6.5 m		29.5	29.1	21.4	12.5	12.0	10.0	8.0	
7.0 m			26.5	20.1	12.5	12.0	10.0	8.0	
8.0 m			22.2	17.9	12.5	12.0	10.0	8.0	
9.0 m			17.9	16.0	12.5	12.0	10.0	8.0	
10.0 m			14.7	13.7	12.5	12.0	10.0	8.0	
11.0 m			12.2	11.8	12.3	11.1	10.0	8.0	
12.0 m			10.1	9.9	10.4	10.3	9.4	8.0	
13.0 m			8.55	8.35	9.2	9.55	8.75	7.8	
14.0 m				7.2	8.1	8.4	8.1	7.55	
16.0 m				5.3	6.15	6.5	6.6	6.7	
18.0 m				3.9	4.75	5.3	5.4	5.3	
20.0 m				2.9	3.7	4.2	4.45	4.5	
22.0 m					2.85	3.35	3.6	3.7	
24.0 m					2.15	2.65	2.9	3.05	
26.0 m					1.55	2.1	2.3	2.35	
27.0 m					1.3	1.85	2.0	2.1	
28.0 m						1.6	1.75	1.85	
30.0 m						1.1	1.35	1.45	
32.0 m						0.75	1.0	1.1	
33.0 m						0.6	0.8	0.95	
34.0 m							0.65	0.8	
35.0 m							0.5	0.65	
36.0 m								0.5	
A (°)		0-84					23-84	31-84	
Standard hook		60 t hook			25 t hook				

A= Boom angle range (for the unladen condition)

## [Boom]

Unit: ton

		Outriggers middle extended (7.2 m)					-Over sides-	
Working radius \ Boom length	9.8 m	16.6 m	23.5 m	30.3 m	37.2 m	41.2 m	44.0 m	
2.8 m	55.0	32.0	24.0	12.5				
3.0 m	55.0	32.0	24.0	12.5				
3.5 m	50.0	32.0	24.0	12.5	12.0			
4.0 m	48.0	32.0	24.0	12.5	12.0	10.0		
4.5 m	43.5	32.0	24.0	12.5	12.0	10.0	8.0	
5.0 m	39.5	32.0	24.0	12.5	12.0	10.0	8.0	
5.5 m	35.5	32.0	24.0	12.5	12.0	10.0	8.0	
6.0 m	32.0	31.3	22.9	12.5	12.0	10.0	8.0	
6.5 m	29.5	29.1	21.4	12.5	12.0	10.0	8.0	
7.0 m		26.5	20.1	12.5	12.0	10.0	8.0	
8.0 m		21.1	17.9	12.5	12.0	10.0	8.0	
9.0 m		16.4	16.0	12.5	12.0	10.0	8.0	
10.0 m		13.2	13.1	12.5	12.0	10.0	8.0	
11.0 m		10.9	10.7	11.8	11.1	10.0	8.0	
12.0 m		9.2	8.95	9.9	10.3	9.4	8.0	
13.0 m		7.75	7.6	8.5	9.1	8.75	7.8	
14.0 m			6.5	7.35	7.85	8.1	7.55	
16.0 m			4.7	5.6	6.25	6.25	6.4	
18.0 m			3.4	4.3	4.9	5.1	5.1	
20.0 m			2.4	3.25	3.85	4.05	4.2	
22.0 m				2.45	3.0	3.25	3.4	
24.0 m				1.8	2.3	2.55	2.7	
26.0 m				1.25	1.75	1.95	2.05	
27.0 m				1.0	1.55	1.7	1.8	
28.0 m					1.3	1.45	1.6	
30.0 m					0.9	1.05	1.2	
32.0 m					0.55	0.7	0.85	
33.0 m						0.55	0.65	
34.0 m							0.5	
A (°)	0-84				18-84	30-84	36-84	
Standard hook	60 t hook		25 t hook					

A= Boom angle range (for the unladen condition)

## [Boom]

Unit: ton

		Outriggers middle extended (5.28 m)				-Over sides-	
Working radius \ Boom length	9.8 m	16.6 m	23.5 m	30.3 m	37.2 m	41.2 m	44.0 m
2.8 m	50.0	32.0	24.0	12.5			
3.0 m	50.0	32.0	24.0	12.5			
3.5 m	46.5	32.0	24.0	12.5	12.0		
4.0 m	41.9	32.0	24.0	12.5	12.0	10.0	
4.5 m	37.9	32.0	24.0	12.5	12.0	10.0	8.0
5.0 m	31.3	30.6	24.0	12.5	12.0	10.0	8.0
5.5 m	25.6	24.8	24.0	12.5	12.0	10.0	8.0
6.0 m	21.5	20.7	20.6	12.5	12.0	10.0	8.0
6.5 m	18.2	17.6	17.4	12.5	12.0	10.0	8.0
7.0 m		15.4	15.2	12.5	12.0	10.0	8.0
8.0 m		12.0	11.9	12.5	12.0	10.0	8.0
9.0 m		9.4	9.3	10.4	10.8	10.0	8.0
10.0 m		7.6	7.4	8.4	9.0	9.2	8.0
11.0 m		6.25	6.05	7.0	7.55	7.8	7.85
12.0 m		5.15	5.0	5.85	6.4	6.65	6.8
13.0 m		4.25	4.15	4.9	5.5	5.7	5.85
14.0 m			3.4	4.15	4.7	4.9	5.05
16.0 m			2.2	2.95	3.45	3.65	3.8
18.0 m			1.2	2.05	2.55	2.75	2.85
19.0 m			0.8	1.65	2.15	2.35	2.5
20.0 m				1.3	1.85	2.05	2.15
22.0 m				0.7	1.25	1.45	1.55
24.0 m					0.7	0.95	1.05
26.0 m						0.5	0.65
A (°)	0-84		16-84	31-84	42-84	49-84	52-84
Standard hook	60 t hook		25 t hook				

A= Boom angle range (for the unladen condition)

## [Boom]

Unit: ton

		Outriggers middle extended (4.28 m)				-Over sides-		
Working radius	Boom length	9.8 m	16.6 m	23.5 m	30.3 m	37.2 m	41.2 m	44.0 m
	2.8 m		45.0	32.0	24.0	12.5		
3.0 m		45.0	32.0	24.0	12.5			
3.5 m		42.0	32.0	24.0	12.5	12.0		
4.0 m		33.1	31.5	24.0	12.5	12.0	10.0	
4.5 m		25.8	25.3	23.5	12.5	12.0	10.0	8.0
5.0 m		20.9	20.3	20.0	12.5	12.0	10.0	8.0
5.5 m		17.4	16.9	16.7	12.5	12.0	10.0	8.0
6.0 m		14.8	14.3	14.1	12.5	12.0	10.0	8.0
6.5 m		12.4	12.3	12.1	12.5	12.0	10.0	8.0
7.0 m			10.7	10.5	11.7	11.8	10.0	8.0
8.0 m			8.2	8.05	9.1	9.65	9.8	8.0
9.0 m			6.45	6.25	7.25	7.8	8.05	7.8
10.0 m			5.15	4.9	5.85	6.35	6.7	6.75
11.0 m			4.1	3.9	4.8	5.35	5.55	5.65
12.0 m			3.2	3.1	3.95	4.45	4.65	4.8
13.0 m			2.5	2.35	3.2	3.7	3.9	4.0
14.0 m				1.7	2.6	3.05	3.25	3.4
15.0 m				1.15	2.1	2.55	2.75	2.85
16.0 m				0.7	1.65	2.1	2.3	2.4
17.0 m					1.2	1.7	1.9	2.0
18.0 m						1.35	1.55	1.65
19.0 m						1.05	1.25	1.35
20.0 m							1.0	1.1
21.0 m							0.7	0.85
22.0 m								0.6
A (°)		0-84		36-84	47-84	52-84	56-84	59-84
Standard hook		60 t hook		25 t hook				

A= Boom angle range (for the unladen condition)

## [Boom]

Unit: ton

		Outriggers minimum extended (2.36 m)				-Over sides-	
Working radius \ Boom length	9.8 m	16.6 m	23.5 m	30.3 m	37.2 m	41.2 m	44.0 m
2.8 m	23.5	20.0	14.0	10.0			
3.0 m	21.1	18.0	14.0	10.0			
3.5 m	16.1	15.7	14.0	10.0	9.0		
4.0 m	12.8	12.4	12.1	10.0	9.0	7.5	
4.5 m	10.4	10.0	9.8	10.0	9.0	7.5	6.5
5.0 m	8.6	8.25	8.05	9.15	9.0	7.5	6.5
5.5 m	7.25	6.85	6.65	7.7	8.3	7.5	6.5
6.0 m	6.15	5.75	5.55	6.55	7.15	7.35	6.5
6.5 m	5.15	4.8	4.65	5.6	6.15	6.4	6.3
7.0 m		4.1	3.9	4.85	5.4	5.6	5.75
8.0 m		2.9	2.75	3.6	4.1	4.35	4.45
9.0 m		2.0	1.8	2.65	3.15	3.35	3.5
10.0 m		1.2	1.0	1.9	2.35	2.55	2.7
11.0 m				1.3	1.75	1.95	2.05
12.0 m					1.25	1.45	1.55
13.0 m						1.0	1.15
A (°)	0-84	37-84	57-84	64-84	66-84	69-84	71-84
Standard hook	60 t hook		25 t hook				

A= Boom angle range (for the unladen condition)



## [Jib (44.0 m Boom)]

Outriggers fully extended (7.6 m)																-360°-	
Boom angle (°)	44.0 m boom + 8.0 m jib								44.0 m boom + 12.7 m jib								
	Offset								Offset								
	5°		25°		45°		60°		5°		25°		45°		60°		
	Working radius (m)	Total rated load (t)	Working radius (m)	Total rated load (t)	Working radius (m)	Total rated load (t)	Working radius (m)	Total rated load (t)	Working radius (m)	Total rated load (t)	Working radius (m)	Total rated load (t)	Working radius (m)	Total rated load (t)	Working radius (m)	Total rated load (t)	
84.0	6.4	4.0	9.1	3.4	10.8	2.1	11.5	1.25	7.7	2.6	12.0	2.0	14.6	1.1	15.8	0.6	
80.0	10.5	4.0	12.9	3.0	14.5	2.05	14.8	1.2	12.0	2.6	16.1	1.8	18.5	1.1	19.3	0.57	
76.0	14.6	4.0	16.6	2.65	18.1	2.0	18.2	1.15	16.6	2.6	20.2	1.65	22.1	1.05	22.7	0.55	
74.0	16.5	3.8	18.3	2.5	19.8	1.9	19.8	1.15	18.7	2.6	22.1	1.55	23.9	1.05	24.4	0.55	
72.0	18.3	3.5	20.2	2.4	21.4	1.85	21.5	1.15	20.8	2.5	24.1	1.5	25.6	1.0	26.0	0.55	
70.0	20.0	3.2	21.9	2.3	23.1	1.75	23.1	1.15	22.7	2.35	26.0	1.45	27.3	1.0	27.6	0.55	
68.0	21.7	2.9	23.4	2.1	24.7	1.7	24.6	1.15	24.5	2.1	27.7	1.35	28.9	0.98	29.1	0.55	
65.0	24.2	2.6	25.9	1.95	26.9	1.6	26.8	1.1	27.3	1.9	30.3	1.3	31.2	0.95	31.3	0.54	
60.0	27.8	1.9	29.6	1.7	30.4	1.5	30.2	1.1	31.3	1.55	34.1	1.1	34.8	0.92	34.8	0.53	
55.0	31.1	1.15	32.7	1.05	33.4	1.05			34.8	0.99	37.5	0.85	38.0	0.8			
53.0	32.3	0.9	33.9	0.84	34.4	0.83			36.1	0.74	38.7	0.66	39.2	0.62			
51.0	33.6	0.68	35.0	0.63	35.5	0.62			37.3	0.52	39.5	0.46	40.2	0.44			
50.0	34.2	0.59	35.6	0.52	36.0	0.52			38.0	0.42	40.0	0.37					
49.0	34.8	0.49	36.2	0.42	36.6	0.42											
48.0	35.4	0.4															
A (°)	47-84		48-84				59-84		49-84				50-84		59-84		

Outriggers middle extended (7.2m)																-Over sides-	
Boom angle (°)	44.0 m boom + 8.0 m jib								44.0 m boom + 12.7 m jib								
	Offset								Offset								
	5°		25°		45°		60°		5°		25°		45°		60°		
	Working radius (m)	Total rated load (t)	Working radius (m)	Total rated load (t)	Working radius (m)	Total rated load (t)	Working radius (m)	Total rated load (t)	Working radius (m)	Total rated load (t)	Working radius (m)	Total rated load (t)	Working radius (m)	Total rated load (t)	Working radius (m)	Total rated load (t)	
84.0	6.4	4.0	9.1	3.4	10.8	2.1	11.5	1.25	7.7	2.6	12.0	2.0	14.6	1.1	15.8	0.6	
80.0	10.5	4.0	12.9	3.0	14.5	2.05	14.8	1.2	12.0	2.6	16.1	1.8	18.5	1.1	19.3	0.57	
76.0	14.6	4.0	16.6	2.65	18.1	2.0	18.2	1.15	16.6	2.6	20.2	1.65	22.1	1.05	22.7	0.55	
74.0	16.5	3.8	18.3	2.5	19.8	1.9	19.8	1.15	18.7	2.6	22.1	1.55	23.9	1.05	24.4	0.55	
72.0	18.3	3.5	20.2	2.4	21.4	1.85	21.5	1.15	20.8	2.5	24.1	1.5	25.6	1.0	26.0	0.55	
70.0	20.0	3.2	21.9	2.3	23.1	1.75	23.1	1.15	22.7	2.35	26.0	1.45	27.3	1.0	27.6	0.55	
68.0	21.7	2.9	23.4	2.1	24.7	1.7	24.6	1.15	24.5	2.1	27.7	1.35	28.9	0.98	29.1	0.55	
65.0	24.1	2.45	25.9	1.95	26.9	1.6	26.8	1.1	27.3	1.9	30.3	1.3	31.2	0.95	31.3	0.54	
60.0	27.6	1.6	29.5	1.5	30.4	1.4	30.2	1.1	31.1	1.4	34.1	1.1	34.8	0.92	34.8	0.53	
55.0	31.0	0.9	32.6	0.86	33.3	0.83			34.6	0.76	37.4	0.66	37.9	0.61			
53.0	32.2	0.66	33.7	0.62	34.4	0.6			35.9	0.52	38.6	0.45	39.1	0.42			
52.0	32.8	0.55	34.3	0.51	34.9	0.49			36.6	0.41							
51.0	33.5	0.46															
A (°)	50-84		51-84				59-84		51-84				52-84		59-84		

A= Boom angle range (for the unladen condition)

## [Jib (44.0 m Boom)]

Outriggers middle extended (5.28 m)																-Over sides-	
Boom angle (°)	44.0 m boom + 8.0 m jib								44.0 m boom + 12.7m jib								
	Offset								Offset								
	5°		25°		45°		60°		5°		25°		45°		60°		
	Working radius (m)	Total rated load (t)	Working radius (m)	Total rated load (t)	Working radius (m)	Total rated load (t)	Working radius (m)	Total rated load (t)	Working radius (m)	Total rated load (t)	Working radius (m)	Total rated load (t)	Working radius (m)	Total rated load (t)	Working radius (m)	Total rated load (t)	
84.0	6.4	4.0	9.1	3.4	10.8	2.1	11.5	1.25	7.7	2.6	12.0	2.0	14.6	1.1	15.8	0.6	
80.0	10.5	4.0	12.9	3.0	14.5	2.05	14.8	1.2	12.0	2.6	16.1	1.8	18.5	1.1	19.3	0.57	
76.0	14.6	4.0	16.6	2.65	18.1	2.0	18.2	1.15	16.6	2.6	20.2	1.65	22.1	1.05	22.7	0.55	
74.0	16.2	3.2	18.3	2.5	19.8	1.9	19.8	1.15	18.7	2.6	22.1	1.55	23.9	1.05	24.4	0.55	
72.0	17.8	2.55	20.1	2.2	21.4	1.85	21.5	1.15	20.4	2.1	24.1	1.5	25.6	1.0	26.0	0.55	
70.0	19.4	2.0	21.5	1.75	23.0	1.6	23.1	1.15	22.1	1.65	26.0	1.45	27.3	1.0	27.6	0.55	
68.0	20.9	1.55	23.1	1.4	24.4	1.3	24.6	1.15	23.8	1.3	27.6	1.2	28.9	0.98	29.1	0.55	
65.0	23.3	1.05	25.3	0.96	26.5	0.88	26.7	0.88	26.3	0.88	29.8	0.82	31.1	0.68	31.3	0.54	
64.0	24.0	0.93	26.0	0.83	27.1	0.76	27.3	0.75	27.1	0.77	30.5	0.71	31.7	0.57	32.0	0.53	
63.0	24.8	0.8	26.7	0.7	27.8	0.63	28.0	0.61	27.9	0.65	31.3	0.61	32.4	0.45			
62.0	25.5	0.66	27.3	0.56	28.4	0.5	28.6	0.48	28.6	0.52							
61.0	26.1	0.52															
A (°)	60-84		61-84						61-84		62-84				63-84		

Outriggers middle extended (4.28 m)																-Over sides-	
Boom angle (°)	44.0 m boom + 8.0 m jib								44.0 m boom + 12.7 m jib								
	Offset								Offset								
	5°		25°		45°		60°		5°		25°		45°		60°		
	Working radius (m)	Total rated load (t)	Working radius (m)	Total rated load (t)	Working radius (m)	Total rated load (t)	Working radius (m)	Total rated load (t)	Working radius (m)	Total rated load (t)	Working radius (m)	Total rated load (t)	Working radius (m)	Total rated load (t)	Working radius (m)	Total rated load (t)	
84.0	6.4	4.0	9.1	3.4	10.8	2.1	11.5	1.25	7.7	2.6	12.0	2.0	14.6	1.1	15.8	0.6	
80.0	10.5	4.0	12.9	3.0	14.5	2.05	14.8	1.2	12.0	2.6	16.1	1.8	18.5	1.1	19.3	0.57	
76.0	14.0	2.8	16.5	2.5	18.1	2.0	18.2	1.15	16.4	2.4	20.2	1.65	22.1	1.05	22.7	0.55	
74.0	15.6	2.1	18.0	1.9	19.7	1.7	19.8	1.15	18.0	1.8	22.0	1.45	23.9	1.05	24.4	0.55	
72.0	17.3	1.6	19.6	1.4	21.1	1.3	21.5	1.15	19.8	1.35	23.7	1.1	25.5	0.92	26.0	0.55	
70.0	18.9	1.15	21.1	1.0	22.6	0.93	22.9	0.89	21.5	0.94	25.3	0.75	27.1	0.68	27.6	0.55	
69.0	19.7	1.0	21.8	0.81	23.3	0.77	23.6	0.73	22.3	0.76	26.1	0.61	27.8	0.56	28.3	0.54	
68.0	20.5	0.84	22.6	0.65	23.9	0.62	24.3	0.59	23.1	0.6	26.8	0.48	28.6	0.44			
67.0	21.3	0.7	23.4	0.5	24.7	0.48	25.0	0.45	24.0	0.45							
66.0	22.1	0.55															
A (°)	65-84		66-84						66-84		67-84				68-84		

A= Boom angle range (for the unladen condition)

## [Jib (41.2 m Boom)]

Outriggers fully extended (7.6 m)																-360°-	
Boom angle (°)	41.2 m boom + 8.0 m jib								41.2 m boom + 12.7 m jib								
	Offset								Offset								
	5°		25°		45°		60°		5°		25°		45°		60°		
	Working radius (m)	Total rated load (t)	Working radius (m)	Total rated load (t)	Working radius (m)	Total rated load (t)	Working radius (m)	Total rated load (t)	Working radius (m)	Total rated load (t)	Working radius (m)	Total rated load (t)	Working radius (m)	Total rated load (t)	Working radius (m)	Total rated load (t)	
84.0	5.7	4.0	8.4	3.5	10.2	2.2	11.0	1.25	6.8	2.6	11.2	2.0	14.0	1.1	15.3	0.6	
80.0	9.5	4.0	12.0	3.2	13.6	2.05	14.2	1.2	11.0	2.6	15.2	1.8	17.6	1.1	18.6	0.57	
76.0	13.3	4.0	15.6	3.0	17.0	2.0	17.3	1.15	15.2	2.6	18.9	1.65	21.1	1.05	21.8	0.55	
74.0	15.2	4.0	17.2	2.8	18.5	1.95	18.8	1.15	17.2	2.6	20.8	1.55	22.7	1.05	23.3	0.55	
72.0	16.9	3.75	18.8	2.7	20.1	1.9	20.3	1.15	19.3	2.6	22.6	1.5	24.3	1.0	24.9	0.55	
70.0	18.5	3.45	20.5	2.65	21.6	1.85	21.8	1.15	21.1	2.5	24.4	1.45	25.9	1.0	26.3	0.55	
68.0	20.2	3.25	22.0	2.45	23.1	1.8	23.2	1.15	23.0	2.35	26.1	1.4	27.5	0.98	27.7	0.55	
65.0	22.6	2.9	24.3	2.2	25.3	1.8	25.3	1.1	25.5	2.1	28.5	1.3	29.7	0.95	29.8	0.54	
60.0	26.0	2.2	27.7	1.95	28.5	1.7	28.5	1.1	29.4	1.75	32.2	1.2	33.0	0.92	33.0	0.53	
55.0	29.2	1.4	30.7	1.35	31.3	1.3			32.8	1.25	35.6	1.05	36.0	0.9			
53.0	30.4	1.15	31.9	1.15	32.3	1.1			34.1	1.0	36.7	0.89	37.0	0.79			
51.0	31.6	0.94	32.9	0.91	33.3	0.88			35.3	0.78	37.8	0.71	38.1	0.67			
49.0	32.7	0.73	34.0	0.7	34.3	0.69			36.5	0.57	39.0	0.53	39.2	0.51			
48.0	33.3	0.65	34.5	0.61	34.7	0.60			37.1	0.48	39.5	0.44	39.7	0.43			
47.0	33.9	0.55	35.0	0.52	35.2	0.51			37.7	0.39							
46.0	34.4	0.46	35.5	0.43	35.7	0.42											
45.0	35.0	0.39															
A (°)	44-84		45-84				59-84		46-84		47-84				59-84		

Outriggers middle extended (7.2 m)																-Over sides-	
Boom angle (°)	41.2 m boom + 8.0 m jib								41.2 m boom + 12.7 m jib								
	Offset								Offset								
	5°		25°		45°		60°		5°		25°		45°		60°		
	Working radius (m)	Total rated load (t)	Working radius (m)	Total rated load (t)	Working radius (m)	Total rated load (t)	Working radius (m)	Total rated load (t)	Working radius (m)	Total rated load (t)	Working radius (m)	Total rated load (t)	Working radius (m)	Total rated load (t)	Working radius (m)	Total rated load (t)	
84.0	5.7	4.0	8.4	3.5	10.2	2.2	11.0	1.25	6.8	2.6	11.2	2.0	14.0	1.1	15.3	0.6	
80.0	9.5	4.0	12.0	3.2	13.6	2.05	14.2	1.2	11.0	2.6	15.2	1.8	17.6	1.1	18.6	0.57	
76.0	13.3	4.0	15.6	3.0	17.0	2.0	17.3	1.15	15.2	2.6	18.9	1.65	21.1	1.05	21.8	0.55	
74.0	15.2	4.0	17.2	2.8	18.5	1.95	18.8	1.15	17.2	2.6	20.8	1.55	22.7	1.05	23.3	0.55	
72.0	16.9	3.75	18.8	2.7	20.1	1.9	20.3	1.15	19.3	2.6	22.6	1.5	24.3	1.0	24.9	0.55	
70.0	18.5	3.45	20.5	2.65	21.6	1.85	21.8	1.15	21.1	2.5	24.4	1.45	25.9	1.0	26.3	0.55	
68.0	20.2	3.25	22.0	2.45	23.1	1.8	23.2	1.15	23.0	2.35	26.1	1.4	27.5	0.98	27.7	0.55	
65.0	22.6	2.85	24.3	2.2	25.3	1.8	25.3	1.1	25.5	2.1	28.5	1.3	29.7	0.95	29.8	0.54	
60.0	25.9	1.9	27.6	1.75	28.5	1.7	28.5	1.1	29.3	1.65	32.2	1.2	33.0	0.92	33.0	0.53	
55.0	29.1	1.15	30.6	1.1	31.2	1.1			32.6	1.0	35.5	0.88	36.0	0.81			
53.0	30.3	0.93	31.7	0.9	32.3	0.87			33.9	0.77	36.6	0.66	37.0	0.64			
51.0	31.5	0.7	32.8	0.68	33.3	0.66			35.1	0.55	37.7	0.47	38.0	0.47			
50.0	32.1	0.6	33.4	0.58	33.8	0.56			35.8	0.45							
49.0	32.6	0.51	33.9	0.49	34.3	0.47											
A (°)	48-84				59-84		49-84		50-84				59-84				

A= Boom angle range (for the unladen condition)

## [Jib (41.2 m Boom)]

Outriggers middle extended (5.28 m)																-Over sides-		
Boom angle (°)	41.2 m boom + 8.0 m jib								41.2 m boom + 12.7 m jib									
	Offset								Offset									
	5°		25°		45°		60°		5°		25°		45°		60°			
	Working radius (m)	Total rated load (t)	Working radius (m)	Total rated load (t)	Working radius (m)	Total rated load (t)	Working radius (m)	Total rated load (t)	Working radius (m)	Total rated load (t)	Working radius (m)	Total rated load (t)	Working radius (m)	Total rated load (t)	Working radius (m)	Total rated load (t)		
84.0	5.7	4.0	8.4	3.5	10.2	2.2	11.0	1.25	6.8	2.6	11.2	2.0	14.0	1.1	15.3	0.6		
80.0	9.5	4.0	12.0	3.2	13.6	2.05	14.2	1.2	11.0	2.6	15.2	1.8	17.6	1.1	18.6	0.57		
76.0	13.3	4.0	15.6	3.0	17.0	2.0	17.3	1.15	15.2	2.6	18.9	1.65	21.1	1.05	21.8	0.55		
74.0	15.0	3.7	17.2	2.8	18.5	1.95	18.8	1.15	17.2	2.6	20.8	1.55	22.7	1.05	23.3	0.55		
72.0	16.6	3.0	18.8	2.55	20.1	1.9	20.3	1.15	19.2	2.5	22.6	1.5	24.3	1.0	24.9	0.55		
70.0	18.1	2.4	20.2	2.05	21.6	1.85	21.8	1.15	20.7	2.0	24.4	1.45	25.9	1.0	26.3	0.55		
68.0	19.7	1.9	21.7	1.65	23.0	1.55	23.2	1.15	22.4	1.6	26.0	1.3	27.5	0.98	27.7	0.55		
65.0	21.8	1.3	23.8	1.15	25.0	1.1	25.3	1.05	24.8	1.1	28.3	0.93	29.6	0.87	29.8	0.54		
63.0	23.2	1.0	25.1	0.88	26.3	0.85	26.5	0.85	26.2	0.81	29.6	0.7	30.9	0.65	31.0	0.53		
62.0	23.9	0.87	25.8	0.75	26.9	0.73	27.0	0.72	26.9	0.68	30.2	0.58	31.5	0.54	31.7	0.52		
61.0	24.7	0.73	26.4	0.63	27.5	0.61	27.6	0.59	27.6	0.55	30.9	0.47						
60.0	25.3	0.6	27.1	0.5	28.1	0.49	28.2	0.46	28.3	0.43								
A (°)	59-84								59-84				60-84		61-84			

Outriggers middle extended (4.28 m)																-Over sides-	
Boom angle (°)	41.2 m boom + 8.0 m jib								41.2 m boom + 12.7 m jib								
	Offset								Offset								
	5°		25°		45°		60°		5°		25°		45°		60°		
	Working radius (m)	Total rated load (t)	Working radius (m)	Total rated load (t)	Working radius (m)	Total rated load (t)	Working radius (m)	Total rated load (t)	Working radius (m)	Total rated load (t)	Working radius (m)	Total rated load (t)	Working radius (m)	Total rated load (t)	Working radius (m)	Total rated load (t)	
84.0	5.7	4.0	8.4	3.5	10.2	2.2	11.0	1.25	6.8	2.6	11.2	2.0	14.0	1.1	15.3	0.6	
80.0	9.5	4.0	12.0	3.2	13.6	2.05	14.2	1.2	11.0	2.6	15.2	1.8	17.6	1.1	18.6	0.57	
76.0	13.0	3.2	15.4	2.7	17.0	2.0	17.3	1.15	15.1	2.55	18.9	1.65	21.1	1.05	21.8	0.55	
74.0	14.6	2.45	16.9	2.15	18.5	1.9	18.8	1.15	16.9	2.1	20.8	1.55	22.7	1.05	23.3	0.55	
72.0	16.2	1.9	18.5	1.65	19.9	1.5	20.3	1.15	18.6	1.6	22.4	1.25	24.3	1.0	24.9	0.55	
70.0	17.8	1.45	20.0	1.25	21.4	1.15	21.7	1.05	20.3	1.2	24.0	0.96	25.8	0.85	26.3	0.55	
68.0	19.3	1.1	21.4	0.93	22.7	0.83	23.1	0.81	21.9	0.86	25.4	0.67	27.2	0.61	27.7	0.55	
67.0	20.0	0.93	22.1	0.79	23.4	0.68	23.7	0.67	22.7	0.72	26.2	0.54	27.9	0.49	28.4	0.49	
66.0	20.8	0.79	22.8	0.65	24.1	0.54	24.3	0.54	23.5	0.59	26.9	0.42					
65.0	21.6	0.64	23.5	0.51													
A (°)	64-84				65-84				65-84				66-84				

A= Boom angle range (for the unladen condition)

2-(2) Outrigger Used Over-front Special Performance  
[Boom]  
-Over-front-

Unit: ton

Working radius \ Boom length	9.8 m	16.6 m	23.5 m	30.3 m	37.2 m	41.2 m	44.0 m
2.8 m	60.0	32.0	24.0	12.5			
3.0 m	56.5	32.0	24.0	12.5			
3.5 m	51.9	32.0	24.0	12.5	12.0		
4.0 m	48.6	32.0	24.0	12.5	12.0	10.0	
4.5 m	44.3	32.0	24.0	12.5	12.0	10.0	8.0
5.0 m	39.5	32.0	24.0	12.5	12.0	10.0	8.0
5.5 m	35.7	32.0	24.0	12.5	12.0	10.0	8.0
6.0 m	32.5	31.3	22.9	12.5	12.0	10.0	8.0
6.5 m	29.5	29.1	21.4	12.5	12.0	10.0	8.0
7.0 m		26.5	20.1	12.5	12.0	10.0	8.0
8.0 m		22.2	17.9	12.5	12.0	10.0	8.0
9.0 m		19.0	16.0	12.5	12.0	10.0	8.0
10.0 m		16.5	14.4	12.5	12.0	10.0	8.0
11.0 m		14.5	13.1	12.3	11.1	10.0	8.0
12.0 m		12.8	11.9	11.3	10.3	9.4	8.0
13.0 m		11.4	10.9	10.4	9.55	8.75	7.8
14.0 m			10.0	9.65	8.9	8.1	7.55
16.0 m			8.15	8.3	7.7	7.1	6.7
18.0 m			6.7	7.25	6.7	6.25	5.9
20.0 m			5.25	6.05	5.9	5.55	5.2
22.0 m				4.9	5.25	4.95	4.65
24.0 m				4.0	4.5	4.4	4.2
26.0 m				3.25	3.75	3.9	3.8
27.0 m				2.95	3.45	3.6	3.55
28.0 m					3.15	3.3	3.35
30.0 m					2.6	2.8	2.9
32.0 m					2.15	2.35	2.4
34.0 m					1.8	1.95	2.05
35.0 m						1.75	1.85
36.0 m						1.6	1.7
38.0 m						1.3	1.4
40.0 m							1.15
A (°)	0-84						
Standard hook	60 t hook		25 t hook				

A= Boom angle range (for the unladen condition)

[Jib]  
-Over-front-

Boom angle (°)	44.0 m boom + 8.0 m jib								44.0 m boom + 12.7 m jib							
	Offset								Offset							
	5°		25°		45°		60°		5°		25°		45°		60°	
	Working radius (m)	Total rated load (t)	Working radius (m)	Total rated load (t)	Working radius (m)	Total rated load (t)	Working radius (m)	Total rated load (t)	Working radius (m)	Total rated load (t)	Working radius (m)	Total rated load (t)	Working radius (m)	Total rated load (t)	Working radius (m)	Total rated load (t)
84.0	6.4	4.0	9.1	3.4	10.8	2.1	11.5	1.25	7.7	2.6	12.0	2.0	14.6	1.1	15.8	0.6
80.0	10.5	4.0	12.9	3.0	14.5	2.05	14.8	1.2	12.0	2.6	16.1	1.8	18.5	1.1	19.3	0.57
76.0	14.6	4.0	16.6	2.65	18.1	2.0	18.2	1.15	16.6	2.6	20.2	1.65	22.1	1.05	22.7	0.55
74.0	16.5	3.8	18.3	2.5	19.8	1.9	19.8	1.15	18.7	2.6	22.1	1.55	23.9	1.05	24.4	0.55
72.0	18.3	3.5	20.2	2.4	21.4	1.85	21.5	1.15	20.8	2.5	24.1	1.5	25.6	1.0	26.0	0.55
70.0	20.0	3.2	21.9	2.3	23.1	1.75	23.1	1.15	22.7	2.35	26.0	1.45	27.3	1.0	27.6	0.55
68.0	21.7	2.9	23.4	2.1	24.7	1.7	24.6	1.15	24.5	2.1	27.7	1.35	28.9	0.98	29.1	0.55
65.0	24.2	2.6	25.9	1.95	26.9	1.6	26.8	1.1	27.3	1.9	30.3	1.3	31.2	0.95	31.3	0.54
60.0	27.8	2.2	29.6	1.7	30.4	1.5	30.2	1.1	31.3	1.55	34.1	1.1	34.8	0.92	34.8	0.53
55.0	31.6	1.85	33.0	1.55	33.5	1.4			35.1	1.35	37.6	1.0	38.1	0.88		
53.0	32.8	1.7	34.2	1.45	34.7	1.35			36.4	1.25	38.8	0.97	39.4	0.86		
50.0	34.7	1.5	35.9	1.35	36.3	1.3			38.5	1.15	40.6	0.91	41.1	0.83		
47.0	36.6	1.4	37.7	1.25	37.9	1.25			40.5	1.05	42.4	0.88	42.7	0.8		
45.0	37.8	1.25	38.8	1.2	38.9	1.2			41.8	1.0	43.4	0.85	43.7	0.79		
40.0	40.4	0.82	41.1	0.79					44.6	0.66	45.9	0.63				
36.0	42.3	0.54	42.9	0.52					46.5	0.42	47.5	0.41				
35.0	42.7	0.48	43.3	0.46					46.9	0.36						
34.0	43.2	0.42	43.8	0.4												
33.0	43.6	0.37														
A (°)	32-84		33-84		44-84		59-84		34-84		35-84		44-84		59-84	

Boom angle (°)	41.2 m boom + 8.0 m jib								41.2 m boom + 12.7 m jib							
	Offset								Offset							
	5°		25°		45°		60°		5°		25°		45°		60°	
	Working radius (m)	Total rated load (t)	Working radius (m)	Total rated load (t)	Working radius (m)	Total rated load (t)	Working radius (m)	Total rated load (t)	Working radius (m)	Total rated load (t)	Working radius (m)	Total rated load (t)	Working radius (m)	Total rated load (t)	Working radius (m)	Total rated load (t)
84.0	5.7	4.0	8.4	3.5	10.2	2.2	11.0	1.25	6.8	2.6	11.2	2.0	14.0	1.1	15.3	0.6
80.0	9.5	4.0	12.0	3.2	13.6	2.05	14.2	1.2	11.0	2.6	15.2	1.8	17.6	1.1	18.6	0.57
76.0	13.3	4.0	15.6	3.0	17.0	2.0	17.3	1.15	15.2	2.6	18.9	1.65	21.1	1.05	21.8	0.55
74.0	15.2	4.0	17.2	2.8	18.5	1.95	18.8	1.15	17.2	2.6	20.8	1.55	22.7	1.05	23.3	0.55
72.0	16.9	3.75	18.8	2.7	20.1	1.9	20.3	1.15	19.3	2.6	22.6	1.5	24.3	1.0	24.9	0.55
70.0	18.5	3.45	20.5	2.65	21.6	1.85	21.8	1.15	21.1	2.5	24.4	1.45	25.9	1.0	26.3	0.55
68.0	20.2	3.25	22.0	2.45	23.1	1.8	23.2	1.15	23.0	2.35	26.1	1.4	27.5	0.98	27.7	0.55
65.0	22.6	2.9	24.3	2.2	25.3	1.8	25.3	1.1	25.5	2.1	28.5	1.3	29.7	0.95	29.8	0.54
60.0	26.2	2.5	27.7	1.95	28.5	1.7	28.5	1.1	29.4	1.75	32.2	1.2	33.0	0.92	33.0	0.53
55.0	29.6	2.2	31.0	1.75	31.6	1.6			33.1	1.55	35.6	1.1	36.0	0.9		
53.0	30.8	2.1	32.2	1.7	32.7	1.55			34.4	1.45	36.8	1.1	37.1	0.9		
50.0	32.8	1.9	33.9	1.65	34.3	1.5			36.3	1.35	38.5	1.05	38.7	0.88		
47.0	34.5	1.75	35.5	1.55	35.7	1.5			38.2	1.3	40.1	1.0	40.3	0.88		
45.0	35.6	1.55	36.6	1.5	36.6	1.45			39.4	1.2	41.2	1.0	41.2	0.88		
40.0	38.0	1.05	38.9	1.0					42.2	0.94	43.7	0.88				
35.0	40.3	0.76	40.9	0.72					44.7	0.61	45.8	0.58				
31.0	41.8	0.55	42.3	0.51					46.3	0.42	47.3	0.41				
30.0	42.2	0.5	42.6	0.46					46.7	0.37						
29.0	42.5	0.45	42.9	0.42												
28.0	42.9	0.41														
A (°)	27-84		28-84		44-84		59-84		29-84		30-84		44-84		59-84	

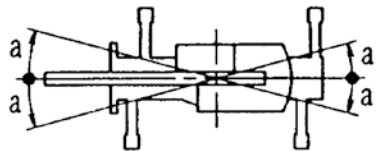
A= Boom angle range (for the unladen condition)

## PRECAUTIONS TO BE TAKEN WHEN THE OUTRIGGERS ARE EXTENDED:

- The total rated loads shown are for the case where the crane is set horizontally on firm level ground. They include the weights of the slings and main winch hook (60 t hook: 490 kg, 25 t hook: 330 kg) when using the boom, and the weights of the slings and auxiliary winch hook (100 kg) when using the jib. The values above the bold lines are based on the crane strength while those below are based on the crane stability.
- Since the working radii are based on the actual values including deflection of the boom, boom operations should be performed in accordance with the working radii.
- The total rated load for the jib differs for boom lengths of 41.2 m or less and more than 41.2 m.
- Use the boom angle as a reference when using the jib. The working radii are reference values for the case where a jib is mounted to a 41.2 m or a 44.0 m boom.
- The total rated load for the single top is obtained by subtracting 390 kg (with a 60 t hook), or 230 kg (with a 25 t hook) from the total rated load of the boom. It includes the weight of the sling and auxiliary hook (100 kg), and must not exceed 5.0 t.
- High-speed unwind should be performed only when lowering the hook alone and sudden braking operations must be avoided.
- The table below shows the standard number of part lines for each boom length. When using with other than this number of part lines, the load per line should not exceed 4.29 t for the main winch, and 5.0 t for the auxiliary winch.

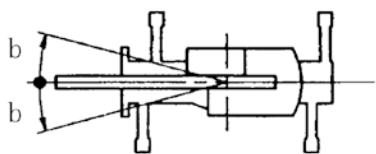
Boom length	9.8 m	16.6 m	23.5 m	30.3 m	37.2 m	41.2 m	44.0 m	Jib/Single top
Number of part lines	14	8	6	4	4	4	4	1

- A single-part line is used for the hook on the jib.
- The hoisting performance for the "Over sides" range will differ according to the extended width of the outriggers. Operations should be performed in accordance with the performance corresponding to the extended width. Also, although the hoisting performances for the "Over front" and "Over rear" ranges are equivalent to those of the outriggers fully extended condition, the front and rear ranges (angle a) will differ according to the width to which the outriggers are extended in the left and right directions.



Extended width	Middle extended (7.2 m)	Middle extended (5.28 m)	Middle extended (4.28 m)	Minimum extended (2.36 m)
Angle a°	45	30	25	10

- Over-front special performance is set when the front outriggers are at maximum extension (7.6 m) and the rear outriggers are at middle extension (5.28 m) or more. The forward area range (angle b) for over-front special performance is 50°. Lifting performance in rear and side is the standard performance for the outrigger extension width.



## 2-(3) Outrigger Not Used

Unit: ton

Working radius (m)	Stationary				Vehicle moving (at 1.6 km/h or less)			
	9.8 m boom		16.6 m boom		9.8 m boom		16.6 m boom	
	Front	-360°-	Front	-360°-	Front	-360°-	Front	-360°-
3.5 m	8.95	3.9	8.7	3.6	7.5	3.2	7.25	3.0
4.0 m	7.8	3.0	7.5	2.65	6.5	2.45	6.3	2.2
4.5 m	6.8	2.2	6.5	1.9	5.7	1.8	5.4	1.55
5.0 m	5.95	1.6	5.65	1.3	4.95	1.3	4.7	1.05
5.5 m	5.2	1.05	4.9	0.75	4.35	0.85	4.1	0.6
6.0 m	4.55	0.6	4.25	0.5	3.8	0.5	3.55	
6.5 m	4.0		3.7		3.3		3.05	
7.0 m			3.15				2.6	
8.0 m			2.3				1.9	
9.0 m			1.6				1.3	
10.0 m			1.0				0.8	
A (°)	0-73	20-60	35-73	60-73	0-73	20-60	35-73	60-73
Standard hook	25 t hook				25 t hook			

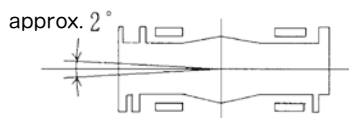
A= Boom angle range (for the unladen condition)

**PRECAUTIONS TO BE TAKEN WHEN THE OUTRIGGERS ARE NOT USED:**

- The total rated loads shown are for the case where the tire pressure on firm level ground is as specified (900 kPa (9.00 kgf/cm<sup>2</sup>)) and the crane is completely spring-locked (minimum telescoped length). They include the weights of the sling and main hook (60 t hook: 490 kg, 25 t hook: 330kg).  
The values above the bold lines are based on the crane strength while those below are based on the crane stability. The foundation, working conditions, etc. should be taken into consideration for actual work.
- Since the working radii are based on the actual values including the deflection of the boom and the tires, operations should be performed in accordance with the working radii.
- The table below shows the standard number of part lines for each boom length. When using with other than this number of part lines, the load per line should not exceed 4.29 t for the main winch, and 5.0 t for the auxiliary winch.

Boom length	9.8 m	16.6 m	Single top
Number of part lines	4	4	1

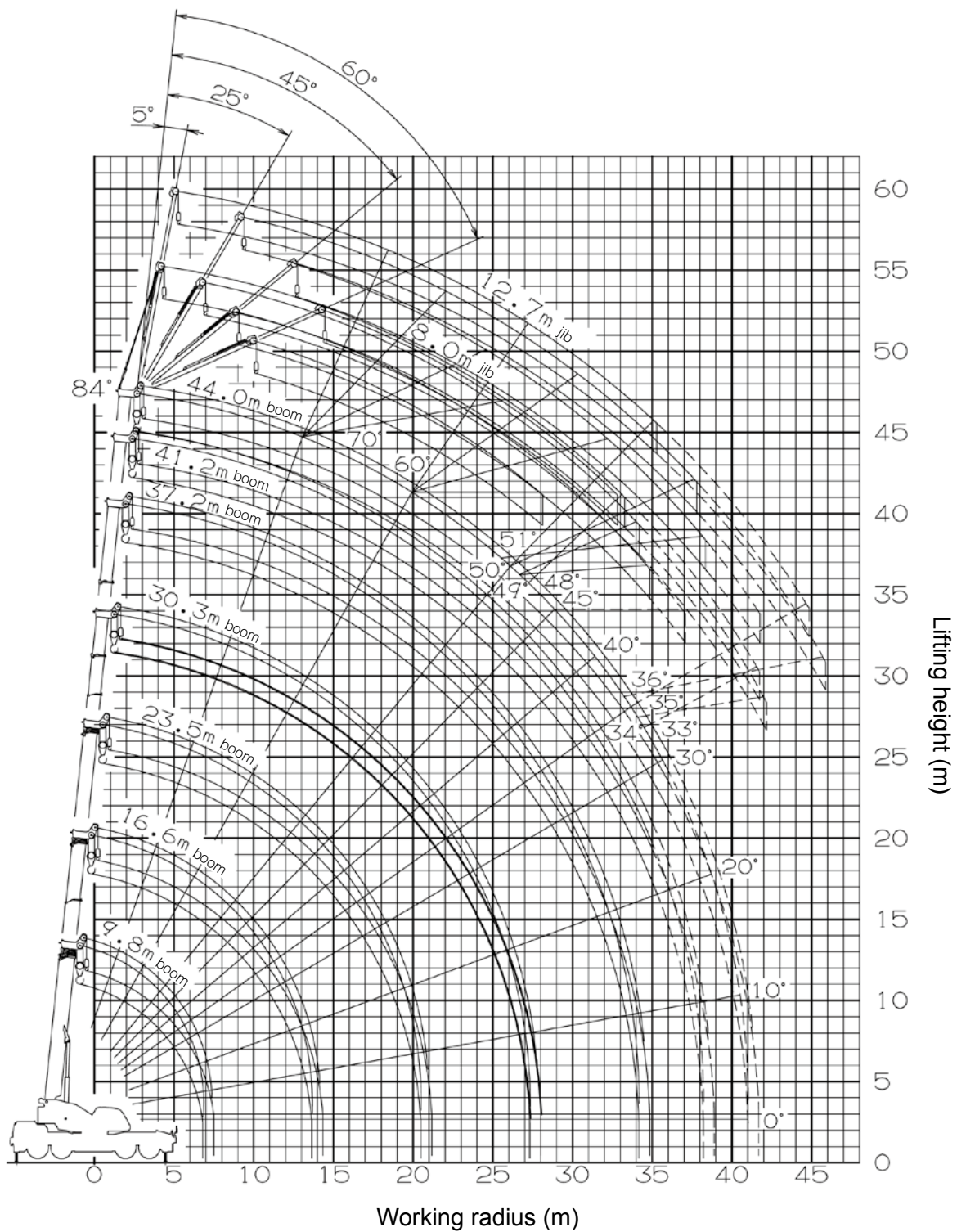
- "Over front" crane operations should be performed only when the AML "over-front area indicator lamp" is lit. The boom must be kept inside a 2° area over front of the carrier when performing "Over front" crane operations without the outriggers.



- The total rated load for the single top is obtained by subtracting 390 kg (with a 60 t hook), or 230 kg (with a 25 t hook) from the total rated load of the boom. It must not exceed 5.0 t.
- High-speed unwind function should not be performed without outriggers. Booms over 16.6 m in length and jibs should not be used without outriggers.
- The "Drive Mode Selection" switch should be set to "6-wheel / Lo" for travelling while hoisting a load and the shift lever should be set to first.
- When travelling while hoisting a load, the swing brake should be applied, the load should be kept as close to the ground as possible but not touching the ground and the speed should be kept at 1.6 km/h or less. In particular, any abrupt steering, starting or braking must be avoided.
- Crane operations should not be performed when travelling while hoisting a load.



### 3. Working Radius - Lifting Height



Note:

1. The deflection of the boom and jib is not incorporated in the figure above.
2. The figure above shows the crane with the maximum outrigger extension (7.6 m).
3. The broken lines in the figure above shows the case for over-front special performance.

# 4. Dimensions

