


ROUGH TERRAIN CRANE



GR-250N

JAPANESE SPECIFICATIONS

OUTLINE	SPEC. NO.
4-section Boom, 2-stage Power-tilt Jib, X-type Outriggers	GR-250N-2-00101

Control No. JA-01

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GR-250N

1. Crane Specifications

☉ Crane

Crane Capacity

9.35 m boom	25,000 kg	x 3.5 m	(8-part line)
16.4 m boom	15,000 kg	x 6.5 m	(6-part line)
23.45 m boom	12,000 kg	x 6.0 m	(4-part line)
30.5 m boom	8,000 kg	x 8.0 m	(4-part line)
8.0 m jib	3,300 kg	x 72°	(single-part line)
13.0 m jib	2,000 kg	x 78°	(single-part line)
Single top	4,000 kg		(single-part line)

Max. Lifting Height

Boom	31.3 m
Jib	44.2 m

Max. Working Radius

Boom	27.9 m
Jib	33.9 m

Boom Length

9.35 m to 30.5 m

Boom Extension

21.15 m

Boom Extension Speed

21.15 m/80 s

Jib Length

8.0 m, 13.0 m

Main Winch Single Line Winding Speed

120 m/min (4 layers)

Main Winch Hook Speed

15.0 m/min (8-part line)

Main Winch Single Line Unwinding Speed

<Reference>

Standard: 120 m/min (4 layers)

High-speed: 160 m/min (4 layers)

Auxiliary Winch Single Line Winding Speed

120 m/min (4 layers)

Auxiliary Winch Hook Speed

120 m/min (single-part line)

Auxiliary Winch Single Line Unwinding Speed

<Reference>

Standard: 120 m/min (4 layers)

High-speed: 160 m/min (4 layers)

Boom Elevation Angle

0° to 84°

Boom Elevation Speed

0° to 84°/45 s

Swing Angle

360° continuous

Swing Speed

2.6 min⁻¹ (rpm)

Wire Rope

Main winch

16mm dia. x 170 m long

Spin-resistant wire rope

Auxiliary winch

16mm dia. x 98 m long

Spin-resistant wire rope

Boom

4-section box structure synchronously telescoping hydraulic boom

Boom Extension

Single double-acting hydraulic cylinder

2 wire rope-type telescoping devices

Jib

Quick-turn type (stored alongside and below boom)

2-stage (pull-out 2nd stage)

Hydraulic non-stage 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

Single double-acting hydraulic cylinder

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 X-type (floats mounted integrally)

Slides and jacks each provided with independent operation device.

Fully extended width 6.5 m

Middle extended width 6.1 m, 5.0 m, 3.6 m

Minimum extended width 3.1 m

Operation Method

Hydraulic pilot valve operation

Max. Vertical Load Capacity of Outrigger

26.9 t

Power Take-Off

PTO wet multi-plate clutch

Hydraulic Pumps

2 variable piston pumps

3 gear pumps

Hydraulic Tank Capacity

380 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

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-T003

Engine

Model Mitsubishi 6M60-TLE3A (with turbo and air cooler)

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

Piston displacement 7.545 L

Max. output 200 kw (272 PS)/2,600 min⁻¹ (rpm)

Max. torque 785 N.m (80.0 kgf.m)/1,400 min⁻¹ (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

Drive

2-wheel drive (4 x 2)/4-wheel drive (4 x 4) selection

Front Axle

Full floating type

Rear Axle

Full floating type

Suspension

Front Hydro-pneumatic suspension (with hydraulic lock cylinder)

Rear 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.

Auxiliary Brake

Permanent magnet-type 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

300 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 11,410 mm

Overall width 2,620 mm

Overall height 3,470 mm

Wheel base 3,880 mm

Tread Front 2,170 mm

Rear 2,170 mm

◎ Weights

Gross vehicle weight 25,595 kg

Front 12,800 kg

Rear 12,795 kg

◎ Performance

Max. traveling speed 49 km/h

Gradeability (tanθ) 0.57

Min. turning radius 5.1 m (4-wheel steering)

8.5 m (2-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: A') 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 [Boom]

Unit: ton

Unit: ton

Outriggers fully extended (6.5 m) -360°-				
Working radius \ Boom length	9.35 m	16.4 m	23.45 m	30.5 m
2.5 m	25.0	15.0	12.0	
3.0 m	25.0	15.0	12.0	
3.5 m	25.0	15.0	12.0	8.0
4.0 m	23.5	15.0	12.0	8.0
4.5 m	21.5	15.0	12.0	8.0
5.0 m	19.6	15.0	12.0	8.0
5.5 m	17.8	15.0	12.0	8.0
6.0 m	16.3	15.0	12.0	8.0
6.5 m	15.1	15.0	11.5	8.0
7.0 m		14.0	10.8	8.0
8.0 m		11.3	9.6	8.0
9.0 m		9.2	8.6	7.6
10.0 m		7.5	7.6	6.9
11.0 m		6.3	6.5	6.3
12.0 m		5.35	5.5	5.6
13.0 m		4.6	4.75	4.9
13.5 m		4.25	4.45	4.55
14.0 m			4.15	4.25
15.0 m			3.65	3.8
16.0 m			3.2	3.4
17.0 m			2.85	3.0
18.0 m			2.5	2.65
19.0 m			2.2	2.4
20.0 m			2.0	2.15
20.5 m			1.9	2.0
21.0 m				1.9
22.0 m				1.7
24.0 m				1.35
26.0 m				1.1
27.9 m				0.9
A (°)	0-84			

Outriggers middle extended (6.1 m) -Over sides-				
Working radius \ Boom length	9.35 m	16.4 m	23.45 m	30.5 m
2.5 m	25.0	15.0	12.0	
3.0 m	25.0	15.0	12.0	
3.5 m	25.0	15.0	12.0	8.0
4.0 m	23.5	15.0	12.0	8.0
4.5 m	21.5	15.0	12.0	8.0
5.0 m	19.6	15.0	12.0	8.0
5.5 m	17.8	15.0	12.0	8.0
6.0 m	16.3	15.0	12.0	8.0
6.5 m	15.0	15.0	11.5	8.0
7.0 m		13.3	10.8	8.0
8.0 m		10.3	9.6	8.0
9.0 m		8.3	8.5	7.6
10.0 m		6.8	7.0	6.9
11.0 m		5.7	5.9	6.0
12.0 m		4.9	5.0	5.1
13.0 m		4.2	4.35	4.4
13.5 m		3.9	4.0	4.1
14.0 m			3.8	3.85
15.0 m			3.3	3.4
16.0 m			2.9	3.0
17.0 m			2.6	2.65
18.0 m			2.3	2.35
19.0 m			2.05	2.1
20.0 m			1.85	1.85
20.5 m			1.75	1.75
21.0 m				1.65
22.0 m				1.5
24.0 m				1.2
26.0 m				0.95
27.8 m				0.75
A (°)	0-84			

A= Boom angle range (for the unladen condition)

[Boom]

Unit: ton

Unit: ton

Outriggers middle extended (5.0 m)		-Over sides-		
Working radius \ Boom length	9.35 m	16.4 m	23.45 m	30.5 m
2.5 m	25.0	15.0	12.0	
3.0 m	25.0	15.0	12.0	
3.5 m	25.0	15.0	12.0	8.0
4.0 m	23.5	15.0	12.0	8.0
4.5 m	21.2	15.0	12.0	8.0
5.0 m	17.2	15.0	12.0	8.0
5.5 m	14.2	15.0	12.0	8.0
6.0 m	12.0	12.7	12.0	8.0
6.5 m	10.3	10.9	10.8	8.0
7.0 m		9.5	9.7	8.0
8.0 m		7.4	7.6	7.5
9.0 m		6.0	6.2	6.2
10.0 m		4.9	5.1	5.2
11.0 m		4.1	4.3	4.35
12.0 m		3.5	3.65	3.7
13.0 m		3.0	3.15	3.2
13.5 m		2.8	2.9	2.95
14.0 m			2.7	2.75
15.0 m			2.35	2.4
16.0 m			2.05	2.1
17.0 m			1.75	1.8
18.0 m			1.55	1.6
19.0 m			1.35	1.4
20.0 m			1.2	1.2
20.5 m			1.1	1.1
21.0 m				1.05
22.0 m				0.9
24.0 m				0.65
A (°)		0-84		32-84

Outriggers middle extended (3.6 m)		-Over sides-		
Working radius \ Boom length	9.35 m	16.4 m	23.45 m	30.5 m
2.5 m	25.0	15.0	12.0	
3.0 m	25.0	15.0	12.0	
3.5 m	19.5	15.0	12.0	8.0
4.0 m	14.8	15.0	12.0	8.0
4.5 m	11.8	12.7	12.0	8.0
5.0 m	9.8	10.5	10.6	8.0
5.5 m	8.1	8.8	9.0	8.0
6.0 m	6.9	7.6	7.7	7.5
6.5 m	5.9	6.5	6.7	6.8
7.0 m		5.7	5.9	6.0
8.0 m		4.5	4.6	4.7
9.0 m		3.6	3.75	3.8
10.0 m		2.9	3.05	3.1
11.0 m		2.4	2.5	2.6
12.0 m		1.95	2.1	2.15
13.0 m		1.60	1.75	1.8
13.5 m		1.45	1.6	1.65
14.0 m			1.45	1.5
15.0 m			1.2	1.25
16.0 m			1.0	1.05
17.0 m			0.8	0.85
18.0 m			0.65	0.7
19.0 m			0.5	0.55
A (°)		0-84	25-84	47-84

A= Boom angle range (for the unladen condition)

[Boom]

Unit: ton

Outriggers minimum extended (3.1 m)		-Over sides-		
Working radius \ Boom length	9.35 m	16.4 m	23.45 m	30.5 m
2.5 m	18.0	15.0	12.0	
3.0 m	18.0	15.0	12.0	
3.5 m	14.5	15.0	12.0	8.0
4.0 m	11.6	12.0	12.0	8.0
4.5 m	9.3	10.0	10.2	8.0
5.0 m	7.6	8.4	8.6	8.0
5.5 m	6.4	7.1	7.3	7.3
6.0 m	5.4	6.1	6.3	6.3
6.5 m	4.7	5.3	5.45	5.5
7.0 m		4.6	4.8	4.85
8.0 m		3.6	3.75	3.8
9.0 m		2.8	3.0	3.05
10.0 m		2.3	2.4	2.5
11.0 m		1.8	1.95	2.05
12.0 m		1.5	1.6	1.65
13.0 m		1.2	1.3	1.35
13.5 m		1.0	1.2	1.25
14.0 m			1.05	1.1
15.0 m			0.85	0.9
16.0 m			0.65	0.7
17.0 m			0.5	0.55
A (°)		0-84	35-84	52-84

A= Boom angle range (for the unladen condition)

[Jib (30.5 m Boom)]

Outriggers fully extended (6.5 m)														-360°-										
Jib length	30.5 m boom + 8.0 m jib								30.5 m boom + 13.0 m jib															
Offset	5°		25°		45°		60°		5°		25°		45°		60°									
Boom angle (°)	R(m)	W(t)	R(m)	W(t)	R(m)	W(t)	R(m)	W(t)	R(m)	W(t)	R(m)	W(t)	R(m)	W(t)	R(m)	W(t)								
84	4.2	3.3	6.8	2.3	8.8	1.7	9.7	1.05	5.2	2.0	9.6	1.25	12.8	0.85	14.4	0.55								
80	7.4	3.3	9.8	2.3	11.6	1.7	12.2	1.05	9.0	2.0	13.0	1.25	15.8	0.85	16.9	0.55								
78	8.9	3.3	11.2	2.3	12.8	1.7	13.3	1.05	10.6	2.0	14.5	1.2	17.2	0.85	18.2	0.55								
76	10.4	3.3	12.5	2.3	14.1	1.7	14.5	1.05	12.3	1.9	15.9	1.15	18.4	0.85	19.4	0.55								
74	11.8	3.3	13.9	2.3	15.2	1.65	15.6	1.05	13.9	1.8	17.3	1.1	19.7	0.85	20.5	0.55								
72	13.2	3.3	15.1	2.3	16.4	1.65	16.7	1.05	15.3	1.65	18.7	1.1	20.9	0.85	21.6	0.55								
70	14.6	3.25	16.4	2.3	17.5	1.6	17.7	1.05	16.8	1.6	20.0	1.05	22.1	0.85	22.7	0.55								
68	15.8	3.0	17.6	2.25	18.6	1.55	18.7	1.0	18.2	1.5	21.2	1.0	23.3	0.85	23.7	0.55								
65	17.4	2.55	19.2	2.05	20.1	1.55	20.2	1.0	20.3	1.4	23.1	1.0	24.9	0.84	25.1	0.55								
60	20.2	1.85	21.9	1.65	22.7	1.5	22.7	1.0	23.6	1.25	26.2	0.95	27.6	0.81	27.5	0.54								
55	22.7	1.35	24.2	1.2	24.9	1.2			26.7	1.1	28.9	0.91	29.9	0.79										
53	23.7	1.2	25.1	1.1	25.7	1.05			27.8	0.98	29.9	0.87	30.8	0.79										
50	25.1	1.0	26.5	0.92	26.9	0.92			29.3	0.81	31.3	0.72	32.0	0.7										
47	26.4	0.81	27.7	0.75	28.0	0.75			30.8	0.65	32.6	0.58	33.0	0.57										
45	27.3	0.7	28.4	0.65	28.6	0.65			31.7	0.56	33.4	0.5	33.7	0.49										
40	29.3	0.47	30.2	0.43					33.9	0.36														
A (°)	39-84				44-84				59-84				39-84				44-84				59-84			

Outriggers middle extended (6.1 m)														-Over sides-						
Jib length	30.5 m boom + 8.0 m jib								30.5 m boom + 13.0 m jib											
Offset	5°		25°		45°		60°		5°		25°		45°		60°					
Boom angle (°)	R(m)	W(t)	R(m)	W(t)	R(m)	W(t)	R(m)	W(t)	R(m)	W(t)	R(m)	W(t)	R(m)	W(t)	R(m)	W(t)				
84	4.2	3.3	6.8	2.3	8.8	1.7	9.7	1.05	5.2	2.0	9.6	1.25	12.8	0.85	14.4	0.55				
80	7.4	3.3	9.8	2.3	11.6	1.7	12.2	1.05	9.0	2.0	13.0	1.25	15.8	0.85	16.9	0.55				
78	8.9	3.3	11.2	2.3	12.8	1.7	13.3	1.05	10.6	2.0	14.5	1.2	17.2	0.85	18.2	0.55				
76	10.4	3.3	12.5	2.3	14.1	1.7	14.5	1.05	12.3	1.9	15.9	1.15	18.4	0.85	19.4	0.55				
74	11.8	3.3	13.9	2.3	15.2	1.65	15.6	1.05	13.9	1.8	17.3	1.1	19.7	0.85	20.5	0.55				
72	13.2	3.3	15.1	2.3	16.4	1.65	16.7	1.05	15.3	1.65	18.7	1.1	20.9	0.85	21.6	0.55				
70	14.6	3.25	16.4	2.3	17.5	1.6	17.7	1.05	16.8	1.6	20.0	1.05	22.1	0.85	22.7	0.55				
68	15.8	3.0	17.6	2.25	18.6	1.55	18.7	1.0	18.2	1.5	21.2	1.0	23.3	0.85	23.7	0.55				
65	17.3	2.4	19.2	2.05	20.1	1.55	20.2	1.0	20.3	1.4	23.1	1.0	24.9	0.84	25.1	0.55				
60	20.0	1.7	21.8	1.5	22.7	1.45	22.7	1.0	23.6	1.25	26.2	0.95	27.6	0.81	27.5	0.54				
55	22.6	1.2	24.2	1.1	24.9	1.1			26.6	1.0	28.9	0.88	29.9	0.79						
53	23.6	1.05	25.1	0.99	25.7	0.98			27.7	0.88	29.9	0.78	30.8	0.75						
50	25.0	0.88	26.4	0.8	26.9	0.81			29.3	0.71	31.2	0.62	31.9	0.61						
47	26.4	0.69	27.6	0.63	27.9	0.64			30.7	0.55	32.5	0.48	32.9	0.48						
45	27.2	0.58	28.4	1.53	28.6	0.54			31.6	0.46	33.3	0.4	33.6	0.4						
40	29.2	0.36																		
A (°)	39-84				44-84				59-84				44-84				59-84			

R: Working radius W: Total rated load A= Boom angle range (for the unladen condition)

[Jib (30.5 m Boom)]

Outriggers middle extended (5.0 m)										-Over sides-							
Jib length	30.5 m boom + 8.0 m jib								30.5 m boom + 13.0 m jib								
Offset	5°		25°		45°		60°		5°		25°		45°		60°		
Boom angle (°)	R(m)	W(t)	R(m)	W(t)	R(m)	W(t)	R(m)	W(t)	R(m)	W(t)	R(m)	W(t)	R(m)	W(t)	R(m)	W(t)	
84	4.2	3.3	6.8	2.3	8.8	1.7	9.7	1.05	5.2	2.0	9.6	1.25	12.8	0.85	14.4	0.55	
80	7.4	3.3	9.8	2.3	11.6	1.7	12.2	1.05	9.0	2.0	13.0	1.25	15.8	0.85	16.9	0.55	
78	8.9	3.3	11.2	2.3	12.8	1.7	13.3	1.05	10.6	2.0	14.5	1.2	17.2	0.85	18.2	0.55	
76	10.4	3.3	12.5	2.3	14.1	1.7	14.5	1.05	12.3	1.9	15.9	1.15	18.4	0.85	19.4	0.55	
74	11.8	3.3	13.9	2.3	15.2	1.65	15.6	1.05	13.9	1.8	17.3	1.1	19.7	0.85	20.5	0.55	
72	13.1	3.15	15.1	2.3	16.4	1.65	16.7	1.05	15.3	1.65	18.7	1.1	20.9	0.85	21.6	0.55	
70	14.3	2.6	16.3	2.15	17.5	1.6	17.7	1.05	16.8	1.6	20.0	1.05	22.1	0.85	22.7	0.55	
68	15.4	2.2	17.4	1.85	18.6	1.55	18.7	1.0	18.2	1.5	21.2	1.0	23.3	0.85	23.7	0.55	
65	17.0	1.7	18.9	1.45	20.0	1.35	20.2	1.0	20.2	1.35	23.1	1.0	24.9	0.84	25.1	0.55	
60	19.7	1.1	21.5	0.98	22.5	0.94	22.6	0.93	23.3	0.9	26.0	0.74	27.5	0.7	27.5	0.54	
55	22.4	0.71	24.0	0.62	24.7	0.61			26.2	0.55	28.6	0.45	29.8	0.43			
53	23.3	0.56	24.9	0.49	25.5	0.48			27.3	0.43							
50	24.8	0.37															
A (°)	49-84		52-84				59-84		52-84		54-84				59-84		

Outriggers middle extended (3.6 m)										-Over sides-							
Jib length	30.5 m boom + 8.0 m jib								30.5 m boom + 13.0 m jib								
Offset	5°		25°		45°		60°		5°		25°		45°		60°		
Boom angle (°)	R(m)	W(t)	R(m)	W(t)	R(m)	W(t)	R(m)	W(t)	R(m)	W(t)	R(m)	W(t)	R(m)	W(t)	R(m)	W(t)	
84	4.2	3.3	6.8	2.3	8.8	1.7	9.7	1.05	5.2	2.0	9.6	1.25	12.8	0.85	14.4	0.55	
80	7.4	3.3	9.8	2.3	11.6	1.7	12.2	1.05	9.0	2.0	13.0	1.25	15.8	0.85	16.9	0.55	
78	8.9	3.3	11.2	2.3	12.8	1.7	13.3	1.05	10.6	2.0	14.5	1.2	17.2	0.85	18.2	0.55	
76	10.3	2.9	12.4	2.25	14.1	1.7	14.5	1.05	12.3	1.9	15.9	1.15	18.4	0.85	19.4	0.55	
74	11.4	2.35	13.6	1.85	15.3	1.6	15.6	1.05	13.9	1.8	17.3	1.1	19.7	0.85	20.5	0.55	
72	12.5	1.85	14.7	1.5	16.2	1.3	16.7	1.05	15.2	1.45	18.7	1.1	20.9	0.85	21.6	0.55	
70	13.6	1.45	15.8	1.2	17.3	1.1	17.7	1.05	16.5	1.15	19.9	0.92	22.1	0.82	22.7	0.55	
68	14.8	1.15	16.9	0.98	18.3	0.89	18.8	0.87	17.7	0.93	21.0	0.74	23.1	0.67	23.7	0.55	
65	16.5	0.81	18.5	0.69	19.7	0.63	20.2	0.62	19.7	0.64	22.7	0.51	24.6	0.47	25.1	0.46	
60	19.3	0.35															
A (°)	59-84		64-84				64-84										

R: Working radius W: Total rated load A= Boom angle range (for the unladen condition)

[Jib (23.45 m Boom)]

Outriggers fully extended (6.5 m)																-360°-	
Jib length	23.45 m boom + 8.0 m jib								23.45 m boom + 13.0 m jib								
Offset	5°		25°		45°		60°		5°		25°		45°		60°		
Boom angle (°)	R(m)	W(t)	R(m)	W(t)	R(m)	W(t)	R(m)	W(t)	R(m)	W(t)	R(m)	W(t)	R(m)	W(t)	R(m)	W(t)	
84	3.0	3.3	5.6	2.3	7.6	1.7	8.6	1.05	4.2	2.0	8.5	1.25	11.6	0.85	13.2	0.55	
80	5.4	3.3	7.8	2.3	9.7	1.7	10.5	1.05	7.0	2.0	11.1	1.25	13.9	0.85	15.3	0.55	
78	6.5	3.3	8.9	2.3	10.7	1.7	11.4	1.05	8.3	2.0	12.2	1.2	15.0	0.85	16.2	0.55	
76	7.6	3.3	9.9	2.3	11.6	1.7	12.3	1.05	9.6	1.9	13.4	1.15	16.0	0.85	17.1	0.55	
74	8.7	3.3	11.0	2.3	12.5	1.65	13.2	1.05	10.9	1.8	14.5	1.1	17.0	0.85	18.1	0.55	
72	9.8	3.3	12.0	2.3	13.4	1.65	14.0	1.05	12.1	1.65	15.6	1.1	18.0	0.85	18.9	0.55	
70	10.9	3.3	13.0	2.3	14.3	1.6	14.8	1.05	13.3	1.6	16.7	1.05	19.0	0.85	19.8	0.55	
68	11.9	3.3	13.9	2.3	15.2	1.55	15.6	1.0	14.4	1.5	17.8	1.0	19.9	0.85	20.5	0.55	
65	13.4	3.3	15.4	2.3	16.4	1.55	16.7	1.0	16.1	1.4	19.3	1.0	21.2	0.84	21.7	0.55	
60	15.9	2.9	17.6	2.3	18.4	1.5	18.5	1.0	18.9	1.25	21.8	0.95	23.3	0.81	23.5	0.54	
55	18.1	2.6	19.7	2.15	20.2	1.45			21.5	1.15	24.0	0.91	25.2	0.79			
53	18.9	2.35	20.4	2.1	20.9	1.45			22.5	1.1	24.9	0.9	25.9	0.79			
50	20.2	2.05	21.5	1.85	21.9	1.45			23.9	1.05	26.1	0.88	26.8	0.78			
47	21.3	1.8	22.5	1.65	22.7	1.45			25.2	1.0	27.2	0.87	27.7	0.78			
45	22.0	1.65	23.1	1.55	23.2	1.45			26.0	1.0	27.9	0.87	28.2	0.78			
40	23.6	1.35	24.5	1.3					28.0	0.95	29.4	0.86					
35	25.1	1.15	25.7	1.1					29.6	0.91	30.6	0.85					
30	26.3	1.0	26.8	0.97					31.0	0.81	31.7	0.76					
25	27.3	0.88	27.6	0.86					32.2	0.71	32.4	0.67					
20	28.1	0.79							33.0	0.63							
15	28.7	0.73							33.6	0.59							
10	29.0	0.7							33.9	0.56							
5	29.0	0.7							33.9	0.56							
A (°)	4-84		24-84		44-84		59-84		4-84		24-84		44-84		59-84		

Outriggers middle extended (6.1m)																-Over sides-	
Jib length	23.45 m boom + 8.0 m jib								23.45 m boom + 13.0 m jib								
Offset	5°		25°		45°		60°		5°		25°		45°		60°		
Boom angle (°)	R(m)	W(t)	R(m)	W(t)	R(m)	W(t)	R(m)	W(t)	R(m)	W(t)	R(m)	W(t)	R(m)	W(t)	R(m)	W(t)	
84	3.0	3.3	5.6	2.3	7.6	1.7	8.6	1.05	4.2	2.0	8.5	1.25	11.6	0.85	13.2	0.55	
80	5.4	3.3	7.8	2.3	9.7	1.7	10.5	1.05	7.0	2.0	11.1	1.25	13.9	0.85	15.3	0.55	
78	6.5	3.3	8.9	2.3	10.7	1.7	11.4	1.05	8.3	2.0	12.2	1.2	15.0	0.85	16.2	0.55	
76	7.6	3.3	9.9	2.3	11.6	1.7	12.3	1.05	9.6	1.9	13.4	1.15	16.0	0.85	17.1	0.55	
74	8.7	3.3	11.0	2.3	12.5	1.65	13.2	1.05	10.9	1.8	14.5	1.1	17.0	0.85	18.1	0.55	
72	9.8	3.3	12.0	2.3	13.4	1.65	14.0	1.05	12.1	1.65	15.6	1.1	18.0	0.85	18.9	0.55	
70	10.9	3.3	13.0	2.3	14.3	1.6	14.8	1.05	13.3	1.6	16.7	1.05	19.0	0.85	19.8	0.55	
68	11.9	3.3	13.9	2.3	15.2	1.55	15.6	1.0	14.4	1.5	17.8	1.0	19.9	0.85	20.5	0.55	
65	13.4	3.3	15.4	2.3	16.4	1.55	16.7	1.0	16.1	1.4	19.3	1.0	21.2	0.84	21.7	0.55	
60	15.9	2.9	17.6	2.3	18.4	1.5	18.5	1.0	18.9	1.25	21.8	0.95	23.3	0.81	23.5	0.54	
55	18.1	2.4	19.6	2.1	20.2	1.45			21.5	1.15	24.0	0.91	25.2	0.79			
53	18.9	2.15	20.4	1.9	20.9	1.45			22.5	1.1	24.9	0.9	25.9	0.79			
50	20.0	1.85	21.4	1.7	21.9	1.45			23.9	1.05	26.1	0.88	26.8	0.78			
47	21.2	1.65	22.4	1.5	22.7	1.45			25.2	1.0	27.2	0.87	27.7	0.78			
45	22.0	1.5	23.0	1.35	23.3	1.37			26.0	1.0	27.9	0.87	28.2	0.78			
40	23.6	1.2	24.5	1.15					28.0	0.95	29.4	0.86					
35	25.0	1.0	25.7	0.97					29.6	0.82	30.7	0.76					
30	26.3	0.87	26.8	0.83					31.0	0.69	31.7	0.65					
25	27.3	0.75	27.6	0.72					32.2	0.59	32.4	0.57					
20	28.1	0.66							33.0	0.52							
15	28.6	0.59							33.6	0.46							
10	28.9	0.55							33.9	0.43							
5	29.0	0.55							33.9	0.43							
A (°)	4-84		24-84		44-84		59-84		4-84		24-84		44-84		59-84		

R: Working radius W: Total rated load A= Boom angle range (for the unladen condition)

[Jib (23.45 m Boom)]

Outriggers middle extended (5.0 m)										-Over sides-							
Jib length	23.45 m boom + 8.0 m jib								23.45 m boom + 13.0 m jib								
Offset	5°		25°		45°		60°		5°		25°		45°		60°		
Boom angle (°)	R(m)	W(t)	R(m)	W(t)	R(m)	W(t)	R(m)	W(t)	R(m)	W(t)	R(m)	W(t)	R(m)	W(t)	R(m)	W(t)	
84	3.0	3.3	5.6	2.3	7.6	1.7	8.6	1.05	4.2	2.0	8.5	1.25	11.6	0.85	13.2	0.55	
80	5.4	3.3	7.8	2.3	9.7	1.7	10.5	1.05	7.0	2.0	11.1	1.25	13.9	0.85	15.3	0.55	
78	6.5	3.3	8.9	2.3	10.7	1.7	11.4	1.05	8.3	2.0	12.2	1.2	15.0	0.85	16.2	0.55	
76	7.6	3.3	9.9	2.3	11.6	1.7	12.3	1.05	9.6	1.9	13.4	1.15	16.0	0.85	17.1	0.55	
74	8.7	3.3	11.0	2.3	12.5	1.65	13.2	1.05	10.9	1.8	14.5	1.1	17.0	0.85	18.1	0.55	
72	9.8	3.3	12.0	2.3	13.4	1.65	14.0	1.05	12.1	1.65	15.6	1.1	18.0	0.85	18.9	0.55	
70	10.9	3.3	13.0	2.3	14.3	1.6	14.8	1.05	13.3	1.6	16.7	1.05	19.0	0.85	19.8	0.55	
68	11.9	3.3	13.9	2.3	15.2	1.55	15.6	1.0	14.4	1.5	17.8	1.0	19.9	0.85	20.5	0.55	
65	13.4	3.1	15.4	2.3	16.4	1.55	16.7	1.0	16.1	1.4	19.3	1.0	21.2	0.84	21.7	0.55	
60	15.7	2.2	17.5	1.9	18.4	1.5	18.5	1.0	18.9	1.25	21.8	0.95	23.3	0.81	23.5	0.54	
55	17.8	1.65	19.5	1.45	20.2	1.35			21.5	1.15	24.0	0.91	25.2	0.79			
53	18.6	1.45	20.2	1.3	20.9	1.2			22.5	1.1	24.9	0.9	25.9	0.79			
50	19.8	1.2	21.3	1.1	21.8	1.05			23.9	0.98	26.0	0.84	26.8	0.78			
47	21.0	1.0	22.3	0.94	22.7	0.92			25.1	0.83	27.1	0.71	27.7	0.69			
45	21.8	0.93	22.9	0.85	23.2	0.83			25.9	0.74	27.8	0.64	28.2	0.63			
40	23.4	0.71	24.4	0.65					27.8	0.55	29.3	0.49					
35	24.8	0.53	25.7	0.5					29.5	0.41	30.6	0.36					
30	26.1	0.39	26.7	0.36													
A (°)	29-84				44-84		59-84		34-84				44-84		59-84		

Outriggers middle extended (3.6 m)										-Over sides-							
Jib length	23.45 m boom + 8.0 m jib								23.45 m boom + 13.0 m jib								
Offset	5°		25°		45°		60°		5°		25°		45°		60°		
Boom angle (°)	R(m)	W(t)	R(m)	W(t)	R(m)	W(t)	R(m)	W(t)	R(m)	W(t)	R(m)	W(t)	R(m)	W(t)	R(m)	W(t)	
84	3.0	3.3	5.6	2.3	7.6	1.7	8.6	1.05	4.2	2.0	8.5	1.25	11.6	0.85	13.2	0.55	
80	5.4	3.3	7.8	2.3	9.7	1.7	10.5	1.05	7.0	2.0	11.1	1.25	13.9	0.85	15.3	0.55	
78	6.5	3.3	8.9	2.3	10.7	1.7	11.4	1.05	8.3	2.0	12.2	1.2	15.0	0.85	16.2	0.55	
76	7.6	3.3	9.9	2.3	11.6	1.7	12.3	1.05	9.6	1.9	13.4	1.15	16.0	0.85	17.1	0.55	
74	8.7	3.3	11.0	2.3	12.5	1.65	13.2	1.05	10.9	1.8	14.5	1.1	17.0	0.85	18.1	0.55	
72	9.8	3.3	12.0	2.3	13.4	1.65	14.0	1.05	12.1	1.65	15.6	1.1	18.0	0.85	18.9	0.55	
70	10.8	2.8	12.9	2.2	14.3	1.6	14.8	1.05	13.3	1.6	16.7	1.05	19.0	0.85	19.8	0.55	
68	11.7	2.3	13.8	1.85	15.2	1.55	15.6	1.0	14.4	1.5	17.8	1.0	19.9	0.85	20.5	0.55	
65	13.1	1.8	15.2	1.45	16.4	1.3	16.7	1.0	16.1	1.35	19.3	1.0	21.2	0.84	21.7	0.55	
60	15.4	1.15	17.3	0.99	18.3	0.91	18.5	0.9	18.8	0.9	21.7	0.74	23.3	0.67	23.5	0.54	
55	17.6	0.75	19.3	0.65	20.1	0.61			21.2	0.57	23.9	0.48	25.1	0.44			
53	18.4	0.62	20.1	0.54	20.8	0.5			22.2	0.46	24.7	0.39	25.8	0.37			
50	19.6	0.45	21.2	0.39	21.7	0.37											
A (°)	49-84				59-84		52-84				59-84						

R: Working radius W: Total rated load A= Boom angle range (for the unladen condition)

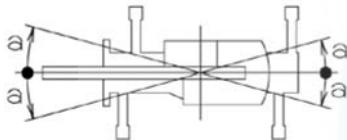
PRECAUTIONS TO BE TAKEN WHEN THE OUTRIGGERS ARE EXTENDED:

1. 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 (220 kg) when using the boom, and the weights of the slings and auxiliary winch hook (60 kg) when using the jib.
2. 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.
3. The total rated load for the jib differs for boom lengths of 23.45 m or less and more than 23.45 m.
4. 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 23.45 m or a 30.5 m boom.
5. The total rated load for the single top is obtained by subtracting 160 kg from total rated load of the boom. It includes the weight of the sling and auxiliary hook (60 kg), and must not exceed 4.0 t.
6. High-speed unwind should be performed only when lowering the hook alone, and sudden braking operations must be avoided.
7. 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 3.6 t for the main winch, and 4.0 t for the auxiliary winch.

Boom length	9.35 m	16.4 m	23.45 m	30.5 m	Jib/Single top
Number of part lines	8	6	4	4	1

- 8 A single-part line is used for the hook on the jib.
- 9 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 (6.1 m)	Middle extended (5.0 m)	Middle extended (3.6 m)	Minimum extended (3.1 m)
Angle a°	50	25	10	5



2-(2) Outrigger Not Used

Unit: ton

Boom length	Stationary						Vehicle moving (at 1.6 km/h or less)					
	9.35 m		16.4 m		23.45 m		9.35 m		16.4 m		23.45 m	
Working radius	Front	360°	Front	360°	Front	360°	Front	360°	Front	360°	Front	360°
3.0 m	14.0	8.3	9.0	7.3			10.0	6.5	7.5	5.1		
3.5 m	14.0	6.8	9.0	7.3	6.5	4.5	10.0	5.2	7.5	5.1	5.5	3.2
4.0 m	12.5	5.3	9.0	5.85	6.5	4.5	9.0	4.2	7.5	4.4	5.5	3.2
4.5 m	10.9	4.3	9.0	4.75	6.5	4.5	8.2	3.4	7.5	3.7	5.5	3.2
5.0 m	9.55	3.5	8.2	4.0	6.5	4.0	7.4	2.8	7.0	3.1	5.5	3.2
5.5 m	8.3	2.8	7.4	3.3	6.1	3.4	6.7	2.4	6.2	2.7	5.15	2.8
6.0 m	7.2	2.3	6.6	2.8	5.65	2.9	5.9	1.9	5.5	2.3	4.8	2.4
6.5 m	6.25	1.8	5.9	2.35	5.25	2.5	5.1	1.5	4.9	1.9	4.45	2.05
7.0 m			5.25	1.95	4.85	2.15			4.35	1.6	4.15	1.8
8.0 m			4.1	1.4	4.1	1.6			3.4	1.1	3.5	1.4
9.0 m			3.25	0.95	3.5	1.2			2.7	0.7	2.95	1.0
10.0 m			2.6	0.6	3.0	0.85			2.15		2.45	0.65
11.0 m			2.1		2.55	0.55			1.7		2.05	
12.0 m			1.7		2.2				1.35		1.7	
13.0 m			1.35		1.85				1.1		1.45	
13.5 m			1.15		1.7				1.0		1.3	
14.0 m					1.55						1.2	
15.0 m					1.3						1.0	
16.0 m					1.05						0.85	
17.0 m					0.85						0.7	
18.0 m					0.65						0.55	
19.0 m					0.5							
A (°)	0-80		42-80	25-80	56-80		0-80		48-80	30-80	59-80	

A= Boom angle range (for the unladen condition)

PRECAUTIONS TO BE TAKEN WHEN THE OUTRIGGERS ARE NOT USED:

1. 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/cm²)) and the crane is completely spring-locked (minimum telescoped length). They include the weights of the sling and main hook (220 kg) when using the boom.

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.

2. 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.
3. 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 3.6 t for the main winch, and 4.0 t for the auxiliary winch.

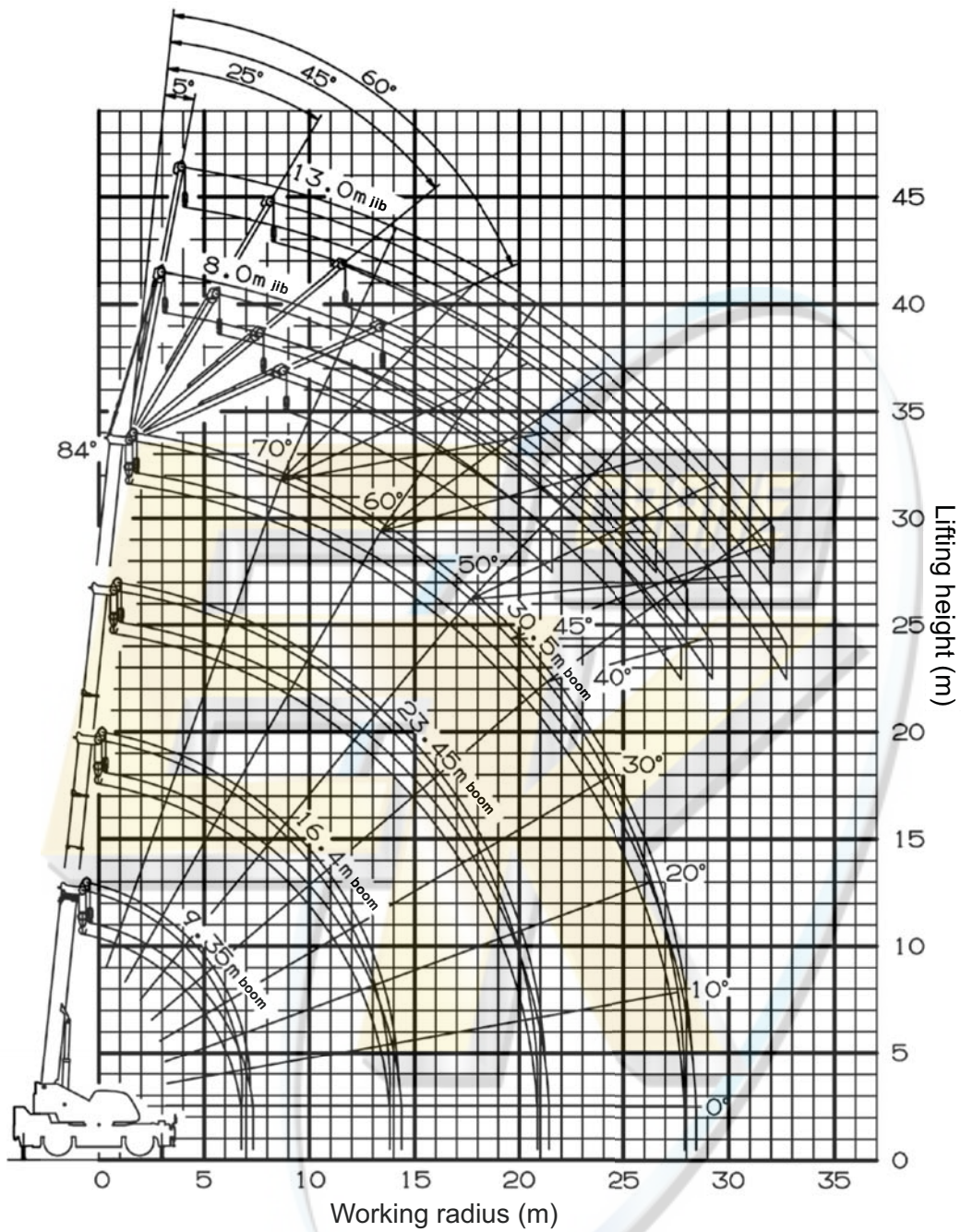
Boom length	9.35 m	16.4 m	23.45 m	Single top
Number of part lines	4	4	4	1

4. High-speed lowering, work with booms exceeding 23.45 m, and work using jibs, should not be performed without outriggers.
5. "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.



6. The total rated load for the single top is obtained by subtracting 160 kg from total rated load of the boom. It includes the weight of the sling and auxiliary hook (60 kg), and must not exceed 4.0 t.
7. The "Drive Mode Selection" switch should be set to "4-wheel / Lo" for travelling while hoisting a load and the shift lever should be set to first.
8. 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.
9. Crane operations should not be performed when travelling with a slung load.

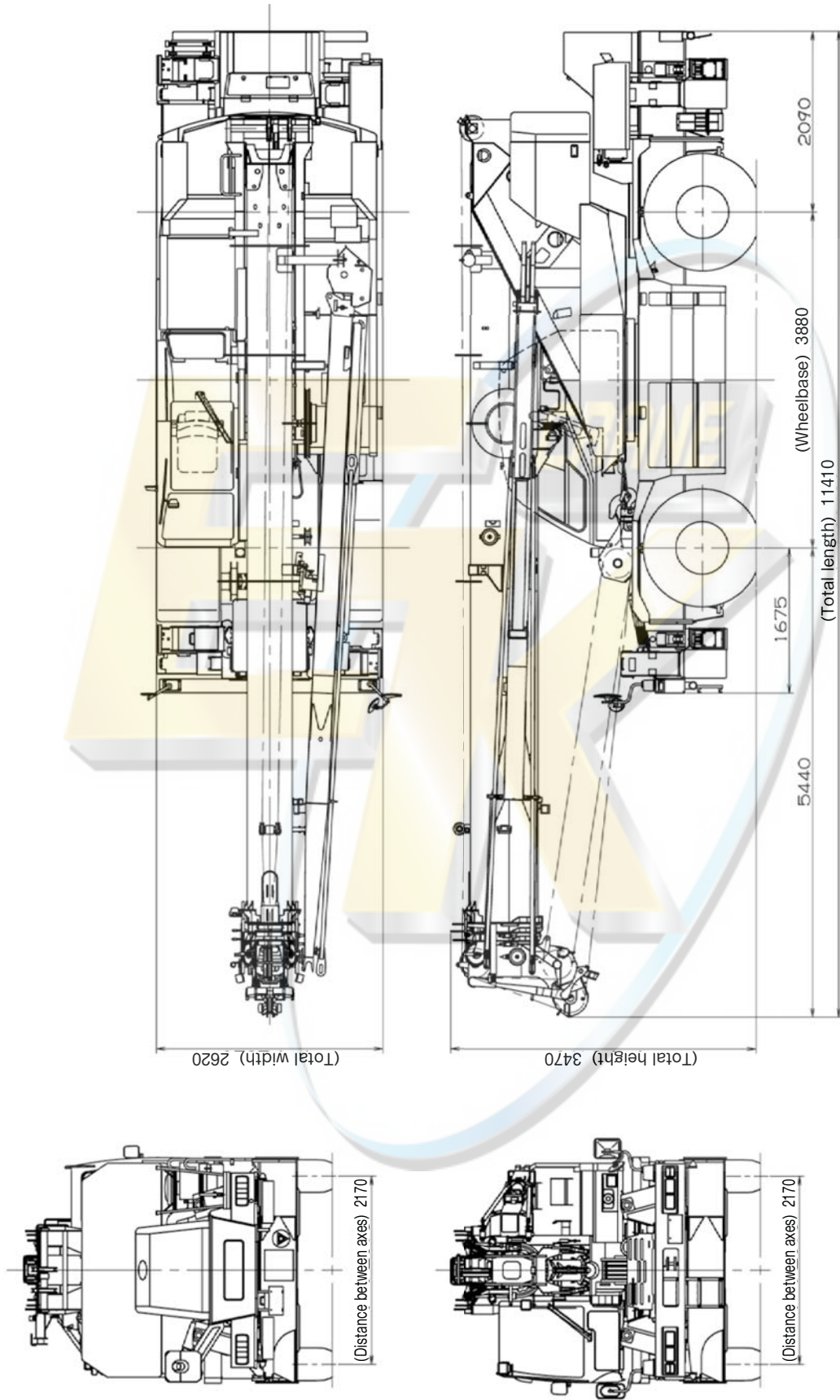
3. Working Radius - Lifting Height



Note:

1. The deflection of the boom is not incorporated in the figure above.
2. The figure above shows the crane with the maximum outrigger extension (6.5 m).

4. Dimensions



* The AML external indicator lamp, loud-speaker, rear view monitoring camera, identification lamp, and roadside lamp are optional equipment.