

ROUGH TERRAIN CRANE

GR-160N

JAPANESE SPECIFICATIONS

OUTLINE	SPEC. NO.
X-type Outrigger	GR-160N-2-00101

Control No. JA-01

GR-160N

1. Crane Specifications

☉ Crane

Crane Capacity

6.5 m boom	16,000 kg	x 3.0 m	(6-part line)
10.7 m boom	12,000 kg	x 4.0 m	(6-part line)
14.9 m boom	9,000 kg	x 4.5 m	(4-part line)
19.1 m boom	7,000 kg	x 5.5 m	(4-part line)
23.3 m boom	5,000 kg	x 6.0 m	(4-part line)
27.5 m boom	3,500 kg	x 7.0 m	(4-part line)
3.8 m jib	2,000 kg	x 70°	(single-part line)
Single top	3,200 kg		(single-part line)

Max. Lifting Height

Boom	28.2 m
Jib	32.0 m

Max. Working Radius

Boom	24.0 m
Jib	27.2 m

Boom Length

6.5 m to 27.5 m

Boom Extension

21.0 m

Boom Extension Speed

21.0 m/83 s

Jib Length

3.8 m

Main Winch Single Line Winding Speed

110 m/min (5 layers)

Main Winch Hook Speed

27.5 m/min (4-part line)

Main Winch Single Line Unwinding Speed

<Reference>

Standard: 110 m/min (5 layers)

High-speed: 150 m/min (5 layers)

Auxiliary Winch Single Line Winding Speed

96 m/min (3 layers)

Auxiliary Winch Hook Speed

96 m/min (single-part line)

Auxiliary Winch Single Line Unwinding Speed

<Reference>

Standard: 96 m/min (3 layers)

High-speed: 130 m/min (3 layers)

Boom Elevation Angle

-9° to 82.5°

Boom Elevation Speed

-9° to 82.5°/34 s

Swing Angle

360° continuous

Swing Speed

2.6 min⁻¹ (rpm)

Wire Rope

Main winch

14 mm dia. x 155 m long

Spin-resistant wire rope

Auxiliary winch

14 mm dia. x 70 m long

Spin-resistant wire rope

Hook

16 t hook (6-part line)

3.2 t hook (single-part line)

Boom

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

Boom Extension

2 double-acting hydraulic cylinders

3 wire rope type telescoping devices

Flow regulator valve with pressure compensation

Jib

Single stage stored under boom

Offset 5°, 25°, 45° 3-stage inclined

Single Top

Mounted and fixed on the 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 5.2 m

Middle extended width 4.8 m, 4.4 m, 3.2 m

Minimum extended width 2.7 m

Operation Method

Hydraulic pilot valve operation

Max. Vertical Load Capacity of Outrigger

18.4 t

Power Take-Off

PTO wet multi-plate clutch

Hydraulic Pumps

2 variable piston pumps

2 gear pumps

Hydraulic Tank Capacity

295 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

Jack pilot check valve

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-T006

Engine

Model Cummins QSB6.7-3C (with turbo charger and air cooler)

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

Piston displacement 6.690 L

Max. output 160 kw (218 PS)/2,500 min⁻¹ (rpm)

Max. torque 843 N.m (86.0 kgf.m)/1,500 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 shaft tube type

Rear Axle

Full floating shaft tube type

Suspension

Front Parallel leaf spring type (with hydraulic lock cylinder)

Rear Parallel leaf spring type (with hydraulic lock cylinder)

Steering

Fully hydraulic power steering

Brake System

Service Brake

Air and hydraulic combined type front and rear disk brakes

Parking Brake

Air-type transmission braking and internal expanding-type spring brake

Auxiliary Brake

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

250 L

Tires

Front 325/95R24 161E Road

Rear 325/95R24 161E Road

Cab

One-man type

With interior equipment

Rubber mounted type

Fully adjustable suspension 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

TV monitor on left side of boom

Equipment

Centralized oiling device (Electric type is optional)

⊙ Dimensions

Overall length 8,310 mm

Overall width 2,200 mm

Overall height 3,150 mm

Wheel base 3,200 mm

Tread Front 1,820 mm

Rear 1,820 mm

⊙ Weights

Gross vehicle weight 19,915 kg

Front 9,925 kg

Rear 9,990 kg

⊙ Performance

Max. traveling speed 49 km/h

Gradeability (tanθ) 0.6

Min. turning radius 4.8 m (4-wheel steering)

8.5 m (2-wheel steering)

⊙ Optional Equipment

Electric mirror

Rear view monitoring camera

Loudspeaker

AML external warning lamp

Roadside lamp

Identification lamp

Toolbox

2. Total Rated Loads

2-(1) Outrigger Extension [Boom]

Unit: ton

Boom length Working radius	Outriggers middle extended (4.8 m)					-Over sides-		
	6.5 m	10.7 m	14.9 m	19.1 m	23.3 m	27.5 m		
2.5 m	16.0	12.0	9.0	7.0				
3.0 m	16.0	12.0	9.0	7.0				
3.5 m	14.0	12.0	9.0	7.0	5.0	3.5		
4.0 m	12.5	12.0	9.0	7.0	5.0	3.5		
4.5 m	11.7 (4.4 m)	11.1	9.0	7.0	5.0	3.5		
5.0 m		10.25	8.9	7.0	5.0	3.5		
5.5 m		9.2	8.2	7.0	5.0	3.5		
6.0 m		7.9	7.6	6.6	5.0	3.5		
7.0 m		5.85	5.85	5.8	4.7	3.5		
8.0 m		4.55	4.5	4.85	4.15	3.4		
9.0 m		3.9 (8.6 m)	3.55	3.9	3.7	3.1		
10.0 m			2.8	3.15	3.3	2.8		
11.0 m			2.25	2.6	2.8	2.55		
12.0 m			1.8	2.15	2.35	2.35		
13.0 m			1.5 (12.8 m)	1.75	1.95	2.1		
14.0 m				1.45	1.65	1.75		
15.0 m				1.2	1.4	1.5		
16.0 m				1.0	1.2	1.3		
17.0 m				0.85	1.0	1.1		
18.0 m					0.85	0.95		
19.0 m					0.7	0.8		
20.0 m					0.55	0.65		
22.0 m						0.45		
A (°)	0-82.5					24-82.5		

A= Boom angle range (for the unladen condition)

Unit: ton

Boom length Working radius	Outriggers fully extended (5.2 m)					-360° -		
	6.5 m	10.7 m	14.9 m	19.1 m	23.3 m	27.5 m		
2.5 m	16.0	12.0	9.0	7.0				
3.0 m	16.0	12.0	9.0	7.0				
3.5 m	14.0	12.0	9.0	7.0	5.0	3.5		
4.0 m	12.5	12.0	9.0	7.0	5.0	3.5		
4.5 m	11.7 (4.4 m)	11.1	9.0	7.0	5.0	3.5		
5.0 m		10.25	8.9	7.0	5.0	3.5		
5.5 m		9.4	8.2	7.0	5.0	3.5		
6.0 m		8.8	7.6	6.6	5.0	3.5		
7.0 m		6.75	6.4	5.8	4.7	3.5		
8.0 m		5.3	5.0	5.2	4.15	3.4		
9.0 m		4.5 (8.6 m)	4.0	4.3	3.7	3.1		
10.0 m			3.25	3.5	3.3	2.8		
11.0 m			2.65	2.95	3.0	2.55		
12.0 m			2.15	2.45	2.65	2.35		
13.0 m			1.8 (12.8 m)	2.05	2.25	2.15		
14.0 m				1.75	1.95	2.0		
15.0 m				1.45	1.7	1.75		
16.0 m				1.25	1.45	1.5		
17.0 m				1.05	1.25	1.3		
18.0 m					1.05	1.1		
19.0 m					0.9	0.95		
20.0 m					0.75	0.8		
22.0 m					0.6 (21.2 m)	0.6		
24.0 m						0.45		
A (°)	0-82.5					0.45		

A= Boom angle range (for the unladen condition)

[Boom]

Unit: ton

Working radius	Boom length	Outriggers middle extended (3.2 m)					-Over sides-		
		6.5 m	10.7 m	14.9 m	19.1 m	23.3 m	27.5 m		
2.5 m		16.0	12.0	9.0	7.0				
3.0 m		14.5	12.0	9.0	7.0				
3.5 m		10.5	10.4	9.0	7.0	5.0	3.5		
4.0 m		8.0	8.25	7.9	7.0	5.0	3.5		
4.5 m		6.8	6.6	6.5	7.0	5.0	3.5		
5.0 m		(4.4 m)	5.45	5.4	5.8	5.0	3.5		
5.5 m			4.6	4.5	4.9	5.0	3.5		
6.0 m			3.9	3.9	4.2	4.4	3.5		
7.0 m			2.9	2.85	3.15	3.3	3.4		
8.0 m			2.15	2.1	2.4	2.6	2.75		
9.0 m			1.8	1.55	1.85	2.05	2.2		
10.0 m			(8.6 m)	1.1	1.45	1.65	1.8		
11.0 m				0.75	1.1	1.3	1.45		
12.0 m				0.5	0.8	1.0	1.15		
13.0 m					0.55	0.8	0.9		
14.0 m					0.4	0.6	0.7		
15.0 m						0.4	0.55		
A (°)		0-82.5					35-82.5	45-82.5	54-82.5

A= Boom angle range (for the unladen condition)

Unit: ton

Working radius	Boom length	Outriggers middle extended (4.4 m)					-Over sides-	
		6.5 m	10.7 m	14.9 m	19.1 m	23.3 m	27.5 m	
2.5 m		16.0	12.0	9.0	7.0			
3.0 m		16.0	12.0	9.0	7.0			
3.5 m		14.0	12.0	9.0	7.0	5.0	3.5	
4.0 m		12.5	12.0	9.0	7.0	5.0	3.5	
4.5 m		11.7	11.1	9.0	7.0	5.0	3.5	
5.0 m		(4.4 m)	9.5	8.9	7.0	5.0	3.5	
5.5 m			8.0	7.9	7.0	5.0	3.5	
6.0 m			6.8	6.7	6.6	5.0	3.5	
7.0 m			5.05	5.0	5.35	4.7	3.5	
8.0 m			3.85	3.85	4.15	4.15	3.4	
9.0 m			3.3	3.0	3.3	3.55	3.1	
10.0 m			(8.6 m)	2.35	2.65	2.9	2.8	
11.0 m				1.85	2.15	2.4	2.5	
12.0 m				1.45	1.75	2.0	2.1	
13.0 m				1.15	1.45	1.65	1.8	
14.0 m				(12.8 m)	1.15	1.4	1.55	
15.0 m					0.95	1.15	1.3	
16.0 m					0.75	0.95	1.1	
17.0 m					0.6	0.8	0.9	
18.0 m						0.65	0.75	
19.0 m						0.5	0.6	
20.0 m							0.5	
A (°)		0-82.5					32-82.5	

A= Boom angle range (for the unladen condition)

[Boom]

Unit: ton

		Outriggers minimum extended (2.7 m)				-Over sides-	
Boom length	Working radius	6.5 m	10.7 m	14.9 m	19.1 m	23.3 m	27.5 m
2.5 m		13.5	12.0	9.0	7.0		
3.0 m		10.6	10.0	9.0	7.0		
3.5 m		8.0	7.8	7.7	7.0	5.0	3.5
4.0 m		6.2	6.2	6.1	6.4	5.0	3.5
4.5 m	5.3		5.0	4.9	5.3	5.0	3.5
5.0 m	(4.4 m)		4.1	4.0	4.4	4.5	3.5
5.5 m			3.4	3.3	3.7	3.85	3.5
6.0 m			2.85	2.8	3.1	3.35	3.4
7.0 m			2.05	1.95	2.3	2.5	2.6
8.0 m			1.45	1.35	1.7	1.9	2.05
9.0 m			1.15	0.9	1.25	1.45	1.6
10.0 m			(8.6 m)	0.55	0.9	1.1	1.25
11.0 m					0.6	0.8	0.95
12.0 m					0.4	0.6	0.7
A (°)		0-82.5	39-82.5	45-82.5	55-82.5	61-82.5	61-82.5

A= Boom angle range (for the unladen condition)

[Jib (27.5 m Boom)]

Outriggers fully extended (5.2 m)		-360°-				
Jib length	27.5 m boom + 3.8 m jib					
Offset	5°		25°		45°	
Boom angle	Working radius (m)	Total rated load (t)	Working radius (m)	Total rated load (t)	Working radius (m)	Total rated load (t)
82.5°	3.6	2.0	4.7	1.5	5.7	1.25
75°	8.0	2.0	8.9	1.5	9.6	1.25
70°	10.8	2.0	11.6	1.5	12.1	1.25
65°	13.2	1.6	14.0	1.35	14.5	1.25
60°	15.5	1.35	16.3	1.2	16.7	1.15
55°	17.7	1.1	18.4	1.1	18.8	1.05
50°	19.7	0.95	20.4	0.9	20.7	0.9
45°	21.6	0.75	22.2	0.7	22.4	0.7
40°	23.3	0.6	23.8	0.55		
35°	24.8	0.45	25.2	0.4		
30°	26.1	0.35	26.4	0.3		
25°	27.2	0.25				
A (°)	24-82.5		29-82.5		44-82.5	

A= Boom angle range (for the unladen condition)

Outriggers middle extended (4.8 m)		-Over sides-				
Jib length	27.5 m boom + 3.8 m jib					
Offset	5°		25°		45°	
Boom angle	Working radius (m)	Total rated load (t)	Working radius (m)	Total rated load (t)	Working radius (m)	Total rated load (t)
82.5°	3.6	2.0	4.7	1.5	5.7	1.25
75°	8.0	2.0	8.9	1.5	9.6	1.25
70°	10.8	2.0	11.6	1.5	12.1	1.25
65°	13.2	1.6	14.0	1.35	14.5	1.25
60°	15.5	1.35	16.3	1.2	16.7	1.15
55°	17.7	1.05	18.4	1.0	18.8	0.95
50°	19.7	0.8	20.3	0.75	20.6	0.7
45°	21.5	0.55	22.1	0.55	22.3	0.5
40°	23.2	0.4	23.7	0.4		
35°	24.7	0.3	25.1	0.3		
A (°)	34-82.5				44-82.5	

A= Boom angle range (for the unladen condition)

Outriggers middle extended (4.4 m)		-Over sides-				
Jib length	27.5 m boom + 3.8 m jib					
Offset	5°		25°		45°	
Boom angle	Working radius (m)	Total rated load (t)	Working radius (m)	Total rated load (t)	Working radius (m)	Total rated load (t)
82.5°	3.6	2.0	4.7	1.5	5.7	1.25
75°	8.0	2.0	8.9	1.5	9.6	1.25
70°	10.8	2.0	11.6	1.5	12.1	1.25
65°	13.2	1.6	14.0	1.35	14.5	1.25
60°	15.4	1.15	16.3	1.1	16.7	1.05
55°	17.6	0.85	18.4	0.85	18.7	0.8
50°	19.6	0.6	20.3	0.6	20.5	0.55
45°	21.5	0.4	22.1	0.4	22.3	0.4
40°	23.1	0.25	23.7	0.25		
A (°)	39-82.5				44-82.5	

A= Boom angle range (for the unladen condition)

Outriggers middle extended (3.2 m)		-Over sides-				
Jib length	27.5 m boom + 3.8 m jib					
Offset	5°		25°		45°	
Boom angle	Working radius (m)	Total rated load (t)	Working radius (m)	Total rated load (t)	Working radius (m)	Total rated load (t)
82.5°	3.6	2.0	4.7	1.5	5.7	1.25
75°	8.0	2.0	8.9	1.5	9.6	1.25
72°	9.5	1.65	10.5	1.45	11.1	1.25
70°	10.5	1.4	11.5	1.3	12.1	1.15
65°	12.9	0.9	13.8	0.85	14.3	0.75
60°	15.2	0.55	16.0	0.55	16.4	0.45
55°	17.3	0.3	18.1	0.3	18.4	0.25
A (°)	54-82.5					

A= Boom angle range (for the unladen condition)

[Jib (23.3 m Boom)]

Outriggers fully extended (5.2 m) -360°-						
Jib length	23.3 m boom + 3.8 m jib					
Offset	5°		25°		45°	
Boom angle	Working radius (m)	Total rated load (t)	Working radius (m)	Total rated load (t)	Working radius (m)	Total rated load (t)
82.5°	2.9	2.0	4.0	1.5	5.0	1.25
75°	6.5	2.0	7.5	1.5	8.3	1.25
70°	8.8	2.0	9.7	1.5	10.5	1.25
65°	11.0	2.0	11.8	1.5	12.5	1.25
60°	13.1	1.7	13.9	1.45	14.4	1.2
55°	15.1	1.5	15.9	1.4	16.1	1.15
50°	16.9	1.15	17.5	1.1	17.6	1.05
45°	18.5	0.9	19.0	0.85	19.1	0.85
40°	19.9	0.7	20.4	0.7		
35°	21.2	0.55	21.6	0.55		
30°	22.4	0.45	22.6	0.45		
25°	23.3	0.4	23.4	0.35		
20°	24.0	0.35				
15°	24.5	0.3				
10°	24.9	0.25				
5°	25.0	0.25				
A (°)	4-82.5		24-82.5		44-82.5	

A= Boom angle range (for the unladen condition)

Outriggers middle extended (4.8 m) -Over sides-						
Jib length	23.3 m boom + 3.8 m jib					
Offset	5°		25°		45°	
Boom angle	Working radius (m)	Total rated load (t)	Working radius (m)	Total rated load (t)	Working radius (m)	Total rated load (t)
82.5°	2.9	2.0	4.0	1.5	5.0	1.25
75°	6.5	2.0	7.5	1.5	8.3	1.25
70°	8.8	2.0	9.7	1.5	10.5	1.25
65°	11.0	2.0	11.8	1.5	12.5	1.25
60°	13.1	1.7	13.9	1.45	14.4	1.2
55°	14.9	1.25	15.7	1.15	16.1	1.15
50°	16.7	0.95	17.4	0.9	17.6	0.85
45°	18.3	0.7	18.9	0.7	19.0	0.65
40°	19.8	0.55	20.3	0.5		
35°	21.1	0.4	21.5	0.4		
30°	22.2	0.3	22.5	0.3		
25°	23.2	0.25	23.4	0.25		
A (°)	24-82.5				44-82.5	

A= Boom angle range (for the unladen condition)

Outriggers middle extended (4.4 m) -Over sides-						
Jib length	23.3 m boom + 3.8 m jib					
Offset	5°		25°		45°	
Boom angle	Working radius (m)	Total rated load (t)	Working radius (m)	Total rated load (t)	Working radius (m)	Total rated load (t)
82.5°	2.9	2.0	4.0	1.5	5.0	1.25
75°	6.5	2.0	7.5	1.5	8.3	1.25
70°	8.8	2.0	9.7	1.5	10.5	1.25
65°	11.0	2.0	11.8	1.5	12.5	1.25
60°	12.9	1.4	13.9	1.3	14.4	1.2
55°	14.8	1.0	15.6	0.95	16.0	0.9
50°	16.6	0.7	17.3	0.7	17.6	0.65
45°	18.3	0.5	18.8	0.5	19.0	0.5
40°	19.7	0.35	20.2	0.35		
35°	21.1	0.25	21.4	0.25		
A (°)	34-82.5				44-82.5	

A= Boom angle range (for the unladen condition)

Outriggers middle extended (3.2 m) -Over sides-						
Jib length	23.3 m boom + 3.8 m jib					
Offset	5°		25°		45°	
Boom angle	Working radius (m)	Total rated load (t)	Working radius (m)	Total rated load (t)	Working radius (m)	Total rated load (t)
82.5°	2.9	2.0	4.0	1.5	5.0	1.25
75°	6.5	2.0	7.5	1.5	8.3	1.25
72°	7.8	2.0	8.8	1.5	9.6	1.25
70°	8.7	1.65	9.7	1.4	10.5	1.25
65°	10.8	1.0	11.8	0.9	12.5	0.85
60°	12.8	0.6	13.8	0.55	14.2	0.5
55°	14.8	0.3	15.5	0.3	15.9	0.3
A (°)	54-82.5					

A= Boom angle range (for the unladen condition)

PRECAUTIONS TO BE TAKEN WHEN THE OUTRIGGERS ARE EXTENDED:

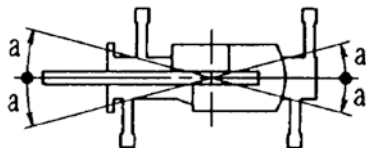
- The total rated loads shown are for the case where the crane is set horizontally on firm level ground. They include the weights of the slings and main winch hook (140 kg) when using the boom, and the weights of the slings and auxiliary winch hook (60 kg) when using the jib. The values above the bold 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 the deflection of the boom, operations should be performed in accordance with the working radii.
- The total rated load for the jib differs for boom lengths of 23.3 m or less and more than 23.3 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 23.3 m or a 27.5 m boom.
- The total rated load for the single top is obtained by subtracting 80 kg from total rated load of the boom. It includes the weight of the sling and auxiliary hook (60 kg), and must not exceed 3.2 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 2.9 t for the main winch, and 3.2 t for the auxiliary winch.

Boom length	6.5 m	10.7 m	14.9 m	19.1 m	23.3 m	27.5 m	Jib/Single top
Number of part lines	6	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 (4.8 m)	Middle extended (4.4 m)	Middle extended (3.2 m)	Minimum extended (2.7 m)
Angle a°	50	45	20	15

(Angle a° in the chart shows the minimum value)



2-(2) Outrigger Not Used

Unit: ton

Working radius	Stationary							
	6.5 m boom		10.7 m boom		14.9 m boom		19.1 m boom	
	Front	360°	Front	360°	Front	360°	Front	360°
3.0 m	8.0	4.4	7.5	4.5	5.2	4.65	5.0	4.7
3.5 m	7.7	3.5	7.5	3.65	5.2	3.7	5.0	4.0
4.0 m	7.3	2.8	7.3	3.0	5.2	3.0	5.0	3.25
4.5 m	6.6 (4.4 m)	2.2 (4.4 m)	6.4	2.4	4.75	2.35	4.55	2.6
5.0 m			5.45	1.9	4.25	1.8	4.1	2.1
5.5 m			4.6	1.5	3.8	1.4	3.7	1.7
6.0 m			3.9	1.15	3.45	1.05	3.4	1.35
7.0 m			2.95	0.6	2.6	0.5	2.8	0.85
8.0 m			2.25		1.9		2.25	0.45
9.0 m					1.4		1.8	
10.0 m					1.05		1.4	
11.0 m					0.75		1.05	
12.0 m					0.5		0.8	
13.0 m							0.6	
14.0 m							0.4	
A (°)	0-82.5		25-82.5		0-82.5	51-82.5	35-82.5	60-82.5

A= Boom angle range (for the unladen condition)

Unit: ton

Working radius	Vehicle moving (at 1.6 km/h or less)							
	6.5 m boom		10.7 m boom		14.9 m boom		19.1 m boom	
	Front	360°	Front	360°	Front	360°	Front	360°
3.0 m	6.7	3.7	6.3	3.8	4.3	3.8	4.1	3.9
3.5 m	6.5	2.95	6.3	3.0	4.3	3.1	4.1	3.35
4.0 m	6.1	2.35	6.0	2.45	4.3	2.5	4.1	2.7
4.5 m	5.5 (4.4 m)	1.85 (4.4 m)	5.4	2.0	3.9	2.0	3.75	2.15
5.0 m			4.5	1.6	3.5	1.55	3.35	1.7
5.5 m			3.8	1.25	3.2	1.15	3.0	1.35
6.0 m			3.25	0.95	2.95	0.85	2.8	1.1
7.0 m			2.45	0.45	2.15	0.4	2.45	0.7
8.0 m			1.8		1.6		1.9	
9.0 m					1.2		1.45	
10.0 m					0.85		1.1	
11.0 m					0.6		0.85	
12.0 m					0.35		0.6	
13.0 m							0.4	
A (°)	0-82.5		36-82.5		0-82.5	55-82.5	40-82.5	64-82.5

A= Boom angle range (for the unladen condition)

PRECAUTIONS TO BE TAKEN WHEN THE OUTRIGGERS ARE NOT USED:

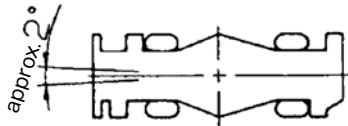
1. The total rated loads shown are for the case where the tire pressure on firm level ground is as specified (900 kPa (9.00 kgf/cm²)) and the crane is completely spring-locked. They include the weights of the sling and main hook (140 kg) when using the boom.

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 2.9 t for the main winch, and 3.2 t for the auxiliary winch.

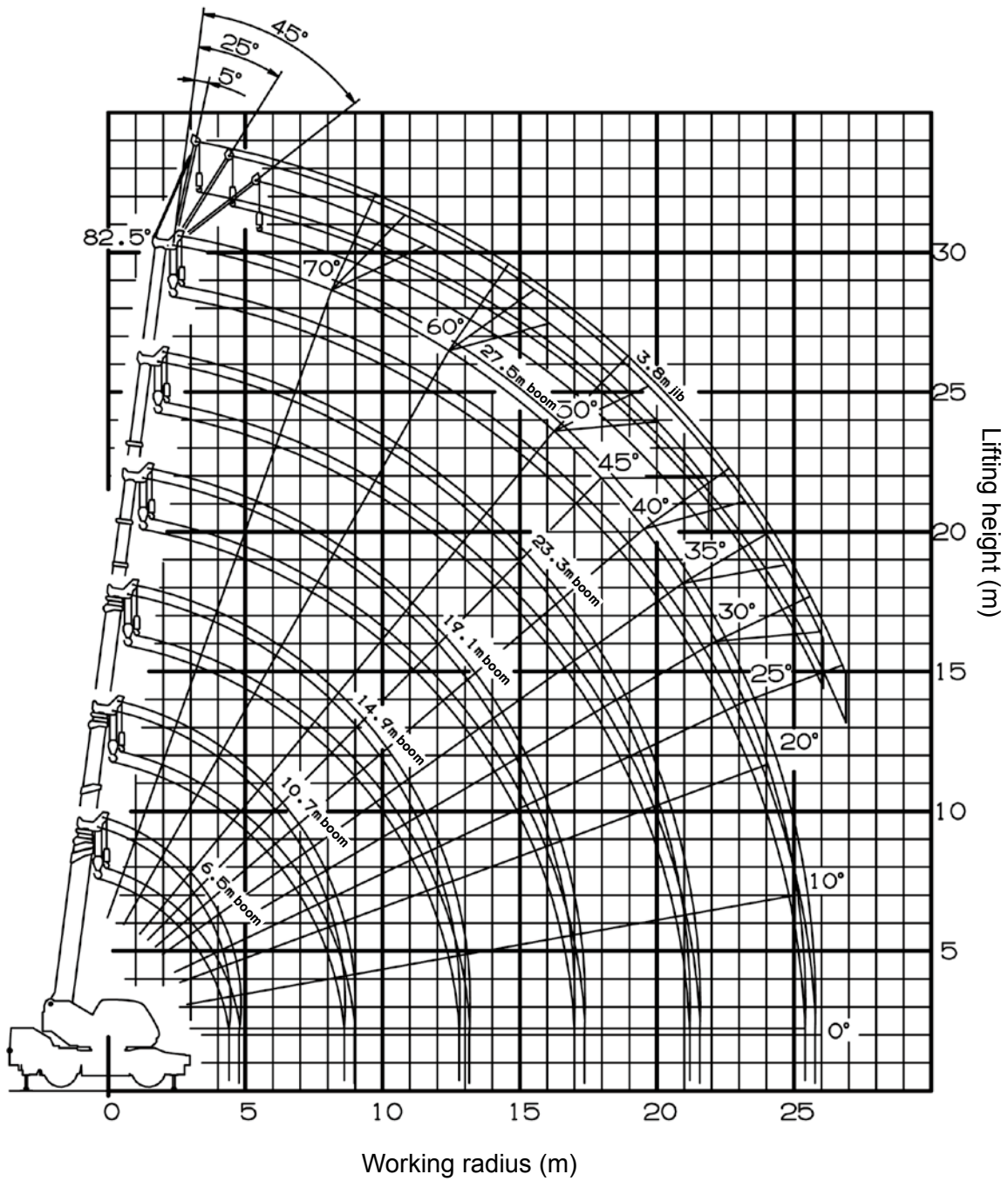
Boom length	6.5 m	10.7 m	14.9 m	19.1 m	Single top
Number of part lines	4	4	4	4	1

4. "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.



5. The total rated load for the single top is obtained by subtracting 80 kg from total rated load of the boom. It includes the weight of the sling and auxiliary hook (60 kg), and must not exceed 3.2 t.
6. High-speed unwind function should not be performed without outriggers. Booms over 19.1 m in length and jibs should not be used without outriggers.
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 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 (5.2 m).

4. Dimensions

