

# TRUCK CRANE

## TG-1600M

TG

### *JAPANESE SPECIFICATIONS*

CARRIER MODEL	OUTLINE	SPEC. NO.
NISSAN DIESEL P-KG67W	3-stage Luffing Jib	TG-1600M-1-10201

- The "luffing jib" is an optional equipment.  
Refer to the following pages concerning the details of this optional jib.

Control No. JA-01

# TG-1600M

## CRANE SPECIFICATIONS

### CRANE CAPACITY

12.5m	Boom	160,000kg	at 3.3m	(20 part-line)
17.5m	Boom	100,000kg	at 6m	(12 part-line)
25.6m	Boom	70,000kg	at 7m	(9 part-line)
33.7m	Boom	65,000kg	at 6m	(7 part-line)
41.9m	Boom	45,000kg	at 9m	(5 part-line)
46.0m	Boom	32,000kg	at 11m	(4 part-line)
50.0m	Boom	27,000kg	at 12m	(4 part-line)
11.3m	Jib	16,000kg	at 77°	(2 part-line)
6.2m + 13.3m	Jib	8,000kg	at 80°	(1 part-line)
6.2m + 21.3m	Jib	5,000kg	at 80°	(1 part-line)
Single top		8,500kg		(1 part-line)

### MAX. LIFTING HEIGHT

Boom	51.0m
Jib	76.0m

### MAX. WORKING RADIUS

Boom	44.0m
Jib	57.5m

### BOOM LENGTH

17.5m - 50.0m
12.5m - 45.0m

### BOOM EXTENSION

32.5m

### BOOM EXTENSION SPEED

32.5m / 195s

### JIB LENGTH

11.3m, 6.2m + 13.3m, 6.2m + 21.3m

### MAIN WINCH SINGLE LINE SPEED

135m/min (6th layer)

### MAIN WINCH HOOK SPEED

11.25m/min (12 part-line)

### AUXILIARY WINCH SINGLE LINE SPEED

112m/min (5th layer)

### AUXILIARY WINCH HOOK SPEED

112m/min (1 part-line)

### BOOM ELEVATION ANGLE

-1.5° - 83°

### BOOM ELEVATION SPEED

-1.5° - 83° / 80s

### SWING ANGLE

360° continue

### SWING SPEED

High range:	1.6 rpm
Low range:	1.0 rpm

### WIRE ROPE

#### Main Winch

25mm × 310m (Diameter × Length)  
Spin-resistant type  
Breaking strength 52t

#### Auxiliary Winch

22mm × 250m (Diameter × Length)  
Spin-resistant type  
Breaking strength 43.3t

### HOOK

160t hook	(20part-line)
65t hook	(7part-line)
25t hook	(3part-line)
8.5t hook	(1part-line)

### BOOM

5-section hydraulically telescoping boom of box construction.

(stages 2-4: synchronized; stage 5: sequenced)

### BOOM EXTENSION

4 double-acting hydraulic cylinder

### JIB

3-staged swingaround boom extensions.

(with 2nd and 3rd stages being of a pull-out type)

#### Offset

11.3m Jib	0°
6.2m + 13.3m Jib and 6.2m + 21.3m Jib	10°, 20°, 30°, 40°, 50°

### SINGLE TOP

Single sheave. Mounted to main boom head by pin.

### HOIST

Driven by hydraulic motor and via planetary gear reducer

Automatic brake

2-speed (High/Low) selection type

2 single winches

### BOOM ELEVATION

2 double-acting hydraulic cylinders

### SWING

Hydraulic motor driven planetary gear reducer

Swing bearing

Hand brake

Swing free/lock changeover type

### OUTRIGGERS

Fully hydraulic H-type

Slides and jacks each provided with independent operation device.

Full extended width 8.0m

Middle extended width 6.0m

### MAX. OUTRIGGER LOAD

115t

### FRONT JACK

Hydraulic operated type

### REAR JACK

Hydraulic type (with cylinder for extension)

### ENGINE FOR CRANE

Model NISSAN DIESEL PE6T

Type 4-cycle, 6 in-line cylinder, direct-injection, water-cooled diesel engine.

Piston Displacement 11,670cc

Max. Output 250PS at 1,800rpm

Max. Torque 106kg-m at 1,200rpm

### HYDRAULIC PUMPS

2 variable piston pumps and 2 variable gear pumps

### HYDRAULIC OIL TANK CAPACITY

1,340 liters

### SAFETY DEVICES

Automatic moment limiter (AML-UGS)

Over-winding cutout

Level gauge

Hook safety latch

Cable follower

Winch drum lock

Winch drum rotation indicator

Hydraulic safety valve

Telescopic counterbalance valve

Elevation counterbalance valve

Jack pilot check valve

Luffing cylinder holding valve

Swing lock

Front jack over load alarm

### EQUIPMENTS

Crane cab heater

Crane cab cooler

Oil cooler

Hydraulic oil temperature gauge

Boom angle indicator

Rear jack extended device

Boom dismount device

Swing frame dismount device

Counterweight dismount device

Radio

Fan

### OPTIONAL EQUIPMENT

Luffing Jib

Jig length 20m, 29m, 38m

With anemometer

## CARRIER SPECIFICATIONS

### MANUFACTURER

NISSAN DIESEL MOTOR CO., LTD

### CARRIER MODEL

P-KG67W

### ENGINE

Model PF10

Type 4-cycle V10-cylinder, direct-injection, water-cooled diesel engine

Piston displacement 21,239cc

Max. output 420PS at 2,200rpm

Max. torque 142kg·m at 1,400rpm

### CLUTCH

Dry multi-plate coil spring type

### TRANSMISSION

7-forward and 1-reverse speeds

Constant-mesh gear (2nd-7th gears synchromeshed)

### REDUCER

Hypoid gear type

Planetary gear hub reduction

### FRONT AXLE

Reverse-elliot type steering knuckles

### REAR AXLE

Full floating, cast torque rods

### SUSPENSION

Front REYCO type (load-balanced semi-elliptic leaf spring type)

Rear Equalizer and torque rods

### STEERING

Recirculating ball screw type with linkage power assistance

### BRAKE SYSTEM

#### Service Brake

Foot operated full air brake on all wheels, dual air line system, internal expanding leading and trailing shoe type.

#### Parking Brake

Mechanically operated, internal expanding duo-servo shoe type acting on drum at transmission case rear.

#### Auxiliary Brake

Electro-pneumatic operated exhaust brake.

#### Emergency

Spring brake, acting on 4 rear wheels

### ELECTRIC SYSTEM

24 V DC. 2 batteries of 115F51 (96Ah)

### FUEL TANK CAPACITY

300 liters

### CAB

Two-man type

### TIRES

Front 14.00-24-24PR

Rear 14.00-24-24PR

### STANDARD EQUIPMENTS

Car heater

Car radio

Car cooler

## GENERAL DATA

### DIMENSIONS (CARRIER ONLY)

Overall length 11,770mm

Overall width 3,400mm

Overall height 2,750mm

Wheel base 1,500mm + 4,300mm + 1,500mm = 7,300mm

Tread Front 2,830mm

Rear 2,540mm

### WEIGHTS (CARRIER ONLY)

Gross vehicle weight

Total 37,000kg

Front 13,860kg

Rear 23,140kg

### PERFORMANCE (CARRIER ONLY)

Max. traveling speed 65km/h

Gradeability (tan  $\theta$ ) 0.40

Mln. turning radius 11.8m

# TOTAL RATED LOADS

[50m BOOM] With 35t counterweight

Unit : ton

Outriggers fully extended + Front jack + Rear jack (360°)							· Outriggers middle extended (360°) · Front jack not used (360°) · Rear jack not used (360°)						
A B (m)	17.5m	25.6m	33.7m	41.9m	46.0m	50.0m	A B (m)	17.5m	25.6m	33.7m	41.9m	46.0m	50.0m
3.3	100.0						3.3	80.0					
3.5	100.0	70.0					3.5	80.0	70.0				
4.0	100.0	70.0					4.0	80.0	70.0	60.0			
4.5	100.0	70.0					4.5	80.0	70.0	60.0			
5.0	100.0	70.0	65.0				5.0	80.0	70.0	60.0			
5.5	100.0	70.0	65.0				5.5	80.0	70.0	60.0			
6.0	100.0	70.0	65.0	45.0			6.0	80.0	70.0	60.0	43.0		
6.5	91.0	70.0	64.0	45.0			6.5	72.0	70.0	60.0	43.0		
7.0	84.0	70.0	62.0	45.0	32.0	27.0	7.0	65.0	65.0	60.0	43.0	32.0	27.0
7.5	78.0	69.0	60.0	45.0	32.0	27.0	7.5	58.0	60.0	58.0	43.0	32.0	27.0
8.0	73.0	68.0	58.0	45.0	32.0	27.0	8.0	52.0	54.0	55.0	43.0	32.0	27.0
9.0	64.0	65.0	53.0	45.0	32.0	27.0	9.0	43.0	45.0	46.0	43.0	32.0	27.0
10.0	56.0	58.0	49.5	43.0	32.0	27.0	10.0	36.0	38.0	39.0	39.0	32.0	27.0
11.0	49.0	51.5	46.0	41.0	32.0	27.0	11.0	30.0	32.0	33.0	34.0	32.0	27.0
12.0	43.0	46.0	42.0	38.0	31.0	27.0	12.0	26.0	27.5	28.5	29.0	30.0	27.0
14.0	35.0	36.0	36.0	32.0	28.0	25.0	14.0	19.0	21.0	22.0	22.5	23.5	24.5
16.0		29.0	30.5	28.0	25.0	22.0	16.0		16.0	17.0	17.5	18.5	19.5
18.0		23.0	25.0	24.0	22.5	20.0	18.0		12.5	13.5	14.0	15.0	15.7
20.0		19.0	20.3	20.5	20.0	17.5	20.0		9.5	10.5	11.0	12.0	12.8
22.0		15.5	16.5	17.0	18.0	16.0	22.0		7.0	8.0	9.0	9.5	10.5
24.0			13.8	14.3	15.3	14.0	24.0			6.0	6.8	7.9	8.5
26.0			11.2	12.0	13.0	12.7	26.0			4.3	5.0	6.1	6.9
28.0			9.4	10.0	11.0	11.5	28.0			2.8	3.4	4.5	5.4
30.0			7.5	8.0	9.3	10.0	30.0			1.5	2.0	3.2	4.0
32.0				6.5	7.7	8.5	32.0				1.0	2.0	3.0
34.0				5.1	6.3	7.2	34.0					1.0	2.0
36.0				3.8	5.0	5.9	36.0						1.0
38.0				2.7	3.9	4.8							
40.0					2.9	3.8							
42.0					2.0	2.9							
44.0						2.1							

A = Boom length  
B = Working radius

**NOTES:**

1. The total rated loads shown are for the case when the outriggers are set horizontally on firm ground. The values above the bold lines are based on the crane strength while those below are based on the crane stability.
2. The weights of the slings and hooks are included in the total rated loads shown.
3. The total rated load is based on the actual working radius including the deflection of the boom.
4. Crane operations are prohibited when the boom length is more than 12.5m and less than 17.5m.
5. The chart below shows the standard number of part lines for each boom length.

A	17.5m	25.6m	33.7m	41.9m	46.0m	50.0m	Single top
H	12	9	7	5	4		1
K	160 t Hook		65 t Hook				8.5 t Hook
L	1575kg		940kg				250 kg

A = Boom length  
H = No. of part-line  
K = Hook type  
L = Hook weight

6. The total rated load for the single top is the same as that of the main boom and must not exceed 8.5 tons. However, when hooks, slings, etc. are mounted on the main boom, one should work with the to rated load obtained by subtracting the weights of the hooks, slings, etc. mounted on the main boom from the total rated load of the main boom.

[50m BOOM] With 18t counterweight

Unit : ton

Outriggers fully extended + Front jack + Rear jack (360°)							· Outriggers middle extended (360°) · Front jack not used (360°) · Rear jack not used (360°)						
A B (m)	17.5m	25.6m	33.7m	41.9m	46.0m	50.0m	A B (m)	17.5m	25.6m	33.7m	41.9m	46.0m	50.0m
3.3	100.0						3.3	80.0					
3.5	100.0	70.0					3.5	80.0	70.0				
4.0	100.0	70.0					4.0	80.0	70.0				
4.5	100.0	70.0					4.5	80.0	70.0				
5.0	100.0	70.0	65.0				5.0	80.0	70.0	60.0			
5.5	95.0	70.0	65.0				5.5	71.0	65.0	60.0			
6.0	88.0	70.0	65.0	45.0			6.0	62.0	60.0	60.0	43.0		
6.5	80.0	70.0	64.0	45.0			6.5	54.0	56.0	55.0	43.0		
7.0	74.0	70.0	62.0	45.0	32.0	27.0	7.0	47.0	49.5	50.0	43.0	32.0	27.0
7.5	68.5	69.0	60.0	45.0	32.0	27.0	7.5	42.0	44.0	45.0	43.0	32.0	27.0
8.0	64.0	66.0	58.0	45.0	32.0	27.0	8.0	37.5	39.5	40.0	40.0	32.0	27.0
9.0	55.0	57.0	53.0	45.0	32.0	27.0	9.0	30.0	32.0	33.0	33.0	32.0	27.0
10.0	47.0	50.0	49.5	43.0	32.0	27.0	10.0	25.0	27.0	28.0	28.0	29.5	27.0
11.0	41.5	44.0	44.0	41.0	32.0	27.0	11.0	20.5	22.5	23.0	23.0	25.0	25.0
12.0	34.5	35.5	38.0	36.0	31.0	27.0	12.0	17.0	19.0	20.0	20.0	21.0	22.0
14.0	25.0	27.0	28.0	29.0	28.0	25.0	14.0	11.0	14.0	14.5	15.0	16.0	16.5
16.0		20.5	21.5	22.0	23.0	22.0	16.0		10.0	11.0	11.1	12.5	13.0
18.0		15.5	16.7	17.8	18.3	19.0	18.0		6.9	8.0	8.5	9.0	10.0
20.0		12.0	13.2	13.5	14.5	15.5	20.0		4.3	5.4	6.0	6.5	7.5
22.0		9.0	10.5	10.7	11.8	12.5	22.0		2.2	3.3	3.9	5.0	5.8
24.0			8.0	8.5	9.5	10.5	24.0			1.6	2.2	3.3	4.2
26.0			5.9	6.5	7.5	8.5	26.0					1.9	2.8
28.0			4.0	4.7	6.0	6.9							
30.0			2.5	3.2	4.4	5.3							
32.0				1.9	3.1	4.0							
34.0				0.8	2.0	2.9							
36.0					1.0	1.9							
38.0						1.0							

A = Boom length  
B = Working radius

NOTES:

- The total rated loads shown are for the case when the outriggers are set horizontally on firm ground. The values above the bold lines are based on the crane strength while those below are based on the crane stability.
- The weights of the slings and hooks are included in the total rated loads shown.
- The total rated load is based on the actual working radius including the deflection of the boom.
- Crane operations are prohibited when the boom length is more than 12.5m and less than 17.5m.
- The chart below shows the standard number of part lines for each boom length.

A	17.5m	25.6m	33.7m	41.9m	46.0m	50.0m	Single top
H	12	9	7	5	4		1
K	160 t Hook		65 t Hook			8.5 t Hook	
L	1575kg		940 kg			250 kg	

A = Boom length  
H = No. of part-line  
K = Hook type  
L = Hook weight

- The total rated load for the single top is the same as that of the main boom and must not exceed 8.5 tons. However, when hooks, slings, etc. are mounted on the main boom, one should work with the total rated load obtained by subtracting the weights of the hooks, slings, etc. mounted on the main boom from the total rated load of the main boom.

[50m BOOM] With 4.5t counterweight

Unit : ton

Outriggers fully extended + Front jack + Rear jack (360°)						
A \ B (m)	17.5 m	25.6 m	33.7 m	41.9 m	46.0 m	50.0 m
3.3	100.0					
3.5	100.0	70.0				
4.0	100.0	70.0				
4.5	100.0	70.0				
5.0	89.0	70.0	65.0			
5.5	79.0	70.0	65.0			
6.0	74.0	70.0	65.0	45.0		
6.5	67.0	70.0	62.0	45.0		
7.0	62.0	63.0	60.0	45.0	32.0	27.0
7.5	57.0	60.0	58.0	45.0	32.0	27.0
8.0	52.0	55.0	56.0	45.0	32.0	27.0
9.0	43.0	46.0	47.5	43.0	32.0	27.0
10.0	34.0	36.5	37.5	38.0	32.0	27.0
11.0	27.0	29.3	30.5	31.5	32.0	27.0
12.0	21.6	24.2	25.4	26.2	27.3	27.0
14.0	14.5	16.8	18.0	18.7	19.7	20.5
16.0		11.8	13.0	13.5	14.5	15.4
18.0		8.4	9.5	10.0	11.0	11.8
20.0		5.7	6.8	7.4	8.4	9.0
22.0		3.2	4.5	5.1	6.2	6.9
24.0			2.5	3.2	4.4	5.2
26.0					2.7	3.7
28.0						2.3

A = Boom length  
B = Working radius

NOTES:

1. The total rated loads shown are for the case when the outriggers are set horizontally on firm ground. The values above the bold lines are based on the crane strength while those below are based on the crane stability.
2. The weights of the slings and hooks are included in the total rated loads shown.
3. The total rated load is based on the actual working radius including the deflection of the boom.
4. Crane operations are prohibited when the boom length is more than 12.5m and less than 17.5m.
5. The chart below shows the standard number of part lines for each boom length.

A	17.5 m	25.6 m	33.7 m	41.9 m	46.0 m	50.0 m	Single top
H	12	9	7	5	4		1
K	160 t Hook		65 t Hook			8.5 t Hook	
L	1575kg		940kg			250 kg	

A = Boom length  
H = No. of part-line  
K = Hook type  
L = Hook weight

6. The total rated load for the single top is the same as that of the main boom and must not exceed 8.5 tons. However, when hooks, slings, etc. are mounted on the main boom, one should work with the total rated load obtained by subtracting the weights of the hooks, slings, etc. mounted on the main boom from the total rated load of the main boom.

[45m BOOM] With 35t counterweight

Unit : ton

Outriggers fully extended + Front jack + Rear jack (360°)						
B (m)	A	12.5 m	20.6 m	28.7 m	36.9 m	45.0 m
	3.3		160.0			
3.5		145.0	70.0			
4.0		135.0	70.0			
4.5		125.0	70.0	55.0		
5.0		115.0	70.0	55.0		
5.5		107.0	70.0	55.0		
6.0		100.0	70.0	55.0	50.0	
6.5		91.0	70.0	55.0	50.0	
7.0		84.0	70.0	55.0	50.0	27.0
7.5		78.0	69.0	52.0	50.0	27.0
8.0		73.0	68.0	50.0	49.0	27.0
9.0		65.0	65.6	45.0	44.5	27.0
10.0		58.0	58.0	41.5	41.0	27.0
11.0			51.5	38.0	38.0	27.0
12.0			46.0	35.5	35.0	27.0
14.0			36.0	31.0	30.5	24.5
16.0			30.5	27.5	26.0	21.5
18.0			25.0	24.5	23.0	19.0
20.0				22.0	19.7	17.0
22.0				18.0	18.5	15.5
24.0				15.0	15.5	14.0
26.0				12.6	13.0	12.7
28.0					11.0	11.3
30.0					9.3	10.5
32.0					7.9	9.5
34.0					6.4	8.2
36.0						7.0
38.0						6.0
40.0						5.0
42.0						4.1

A = Boom length  
B = Working radius

NOTES:

1. The total rated loads shown are for the case when the outriggers are set horizontally on firm ground. The values above the bold lines are based on the crane strength while those below are based on the crane stability.
2. The weights of the slings and hooks are included in the total rated loads shown.
3. The total rated load is based on the actual working radius including the deflection of the boom.
4. The chart below shows the standard number of part lines for each boom length.

A	12.5 m	20.6 m	28.7 m	36.9 m	45.0 m	Single top
H	20	12	9	7	6	4
K	160t Hook (with auxiliary sheave)	160 t Hook		65 t Hook		8.5 t Hook
L	2185 kg	1575 kg		940 kg		250 kg

A = Boom length H = No. of part-line K = Hook type L = Hook weight

5. The total rated load for the single top is the same as that of the main boom and must not exceed 8.5 tons. However, when hooks, slings, etc. are mounted on the main boom, one should work with the to rated load obtained by subtracting the weights of the hooks, slings, etc. mounted on the main boom from the total rated load of the main boom.

[45m BOOM] With 18t counterweight

Unit : ton

Outriggers fully extended + Front jack + Rear jack (360°)					
A \ B (m)	12.5 m	20.6 m	28.7 m	36.9 m	45.0 m
3.3	160.0				
3.5	145.0	70.0			
4.0	130.0	70.0			
4.5	115.0	70.0	55.0		
5.0	105.0	70.0	55.0		
5.5	95.0	70.0	55.0		
6.0	88.0	70.0	55.0	50.0	
6.5	80.0	70.0	55.0	50.0	
7.0	74.0	70.0	55.0	50.0	27.0
7.5	68.5	69.0	52.0	50.0	27.0
8.0	64.0	66.0	50.0	49.0	27.0
9.0	57.0	57.0	45.0	44.5	27.0
10.0	49.0	50.0	41.5	41.0	27.0
11.0		45.5	38.0	38.0	27.0
12.0		38.0	35.5	35.0	27.0
14.0		28.0	29.0	29.5	24.5
16.0		21.2	22.5	23.0	21.5
18.0		16.3	17.5	18.0	19.0
20.0			14.0	14.5	16.4
22.0			11.0	11.5	13.4
24.0			8.5	9.0	11.0
26.0			6.8	7.5	9.2
28.0				5.7	7.5
30.0				4.1	6.4
32.0				2.8	5.0
34.0				1.6	3.9
36.0					2.8
38.0					1.9
40.0					1.1

A = Boom length  
B = Working radius

**NOTES:**

1. The total rated loads shown are for the case when the outriggers are set horizontally on firm ground. The values above the bold lines are based on the crane strength while those below are based on the crane stability.
2. The weights of the slings and hooks are included in the total rated loads shown.
3. The total rated load is based on the actual working radius including the deflection of the boom.
4. The chart below shows the standard number of part lines for each boom length.

A	12.5 m	20.6 m	28.7 m	36.9 m	45.0 m	Single top	
H	20	12	9	7	6	4	1
K	<b>160t Hook</b> <small>(with auxiliary sheave)</small>	<b>160t Hook</b>	<b>65 t Hook</b>			<b>8.5 t Hook</b>	
L	2185 kg	1575 kg	940 kg			250 kg	

A = Boom length H = No. of part-line K = Hook type L = Hook weight

5. The total rated load for the single top is the same as that of the main boom and must not exceed 8.5 tons. However, when hooks, slings, etc. are mounted on the main boom, one should work with the total rated load obtained by subtracting the weights of the hooks, slings, etc. mounted on the main boom from the total rated load of the main boom.



[45m BOOM] With 4.5t counterweight

Unit : ton

Outriggers fully extended + Front jack + Rear jack (360°)						
B (m) \ A	A					
	12.5m	20.6m	28.7m	36.9m	45.0m	
3.3	100.0					
3.5	100.0	70.0				
4.0	100.0	70.0				
4.5	100.0	70.0	55.0			
5.0	87.0	70.0	55.0			
5.5	77.0	70.0	55.0			
6.0	72.0	70.0	55.0	50.0		
6.5	65.0	70.0	55.0	50.0		
7.0	60.0	70.0	55.0	50.0	27.0	
7.5	55.0	63.0	52.0	50.0	27.0	
8.0	52.0	58.0	50.0	49.0	27.0	
9.0	47.0	50.0	45.0	44.5	27.0	
10.0	37.0	40.0	40.0	40.6	27.0	
11.0		32.5	33.5	33.5	27.0	
12.0		27.2	28.0	28.2	27.0	
14.0		19.5	20.3	20.5	22.0	
16.0		14.0	15.0	15.3	17.2	
18.0		10.3	11.3	11.7	13.4	
20.0			8.3	8.5	10.5	
22.0			6.2	6.5	8.3	
24.0			4.2	4.6	6.5	
26.0			2.5	3.0	5.1	
28.0					3.7	
30.0					2.5	
32.0					1.4	

A = Boom length  
B = Working radius

NOTES:

1. The total rated loads shown are for the case when the outriggers are set horizontally on firm ground. The values above the bold lines are based on the crane strength while those below are based on the crane stability.
2. The weights of the slings and hooks are included in the total rated loads shown.
3. The total rated load is based on the actual working radius including the deflection of the boom.
4. The chart below shows the standard number of part lines for each boom length.

A	12.5 m		20.6 m	28.7 m	36.9 m	45.0 m	Single top
H	20	12	9	7	6	4	1
K	160t Hook (with auxiliary sheave)	160 t Hook		65 t Hook		8.5 t Hook	
L	2185 kg	1575 kg		940 kg		250 kg	

A = Boom length H = No. of part-line K = Hook type L = Hook weight

5. The total rated load for the single top is the same as that of the main boom and must not exceed 8.5 tons. However, when hooks, slings, etc. are mounted on the main boom, one should work with the total rated load obtained by subtracting the weights of the hooks, slings, etc. mounted on the main boom from the total rated load of the main boom.

[12.5m BOOM]

Unit : ton

Outriggers fully extended + Front jack + Rear jack (360°)		Outriggers middle extended (360°) Front jack not used (360°) Rear jack not used (360°)			
B (m) \ N	0 t	B (m) \ N	35 t	18 t	0 t
3.3	100.0	3.3	80.0	80.0	80.0
3.5	100.0	3.5	80.0	80.0	80.0
4.0	100.0	4.0	80.0	80.0	80.0
4.5	100.0	4.5	80.0	80.0	70.0
5.0	87.0	5.0	80.0	80.0	54.0
5.5	77.0	5.5	80.0	74.0	46.0
6.0	72.0	6.0	80.0	65.0	40.0
6.5	65.0	6.5	72.0	56.0	34.5
7.0	60.0	7.0	65.0	50.0	30.0
7.5	55.0	7.5	60.0	44.0	26.0
8.0	52.0	8.0	55.0	40.0	23.0
9.0	41.0	9.0	45.0	32.0	18.0
10.0	32.0	10.0	38.0	27.0	14.5

B = Working radius N = Counterweight

**NOTES:**

1. The total rated loads shown are for the case when the outriggers are set horizontally on firm ground. The values above the bold lines are based on the crane strength while those below are based on the crane stability.
2. The weights of the slings and hooks are included in the total rated loads shown.
3. The total rated load is based on the actual working radius including the deflection of the boom.
4. The chart below shows the standard number of part lines for the hook.

A	12.5 m	
H	20	12
K	160t Hook (with auxiliary sheave)	160 t Hook
L	2185 kg	1575 kg

A = Boom length  
H = No. of part-line  
K = Hook type  
L = Hook weight

5. The total rated load for the single top is the same as that of the main boom and must not exceed 8.5 tons. However, when hooks, slings, etc. are mounted on the main boom, one should work with the to rated load obtained by subtracting the weights of the hooks, slings, etc. mounted on the main boomtal from the total rated load of the main boom.

[3-stage luffing jib] With 35t counterweight

Unit : ton

E (°)	Outriggers fully extended + Front jib + Rear jib (360°)																						
	11.3m		6.2m + 13.3m		6.2m + 13.3m		6.2m + 21.3m		6.2m + 21.3m		6.2m + 21.3m												
	B (m)	M	B (m)	M	B (m)	M	B (m)	M	B (m)	M	B (m)	M											
80	10.8	16.0	15.1	8.0	17.1	6.0	18.9	5.0	20.4	4.5	21.6	4.0	17.9	5.0	21.3	3.6	24.2	3.0	26.7	2.5	28.6	2.2	
79	12.0	16.0	16.3	7.5	18.3	5.7	20.1	5.0	21.6	4.4	22.7	4.0	19.3	4.8	22.6	3.5	25.5	2.9	27.9	2.5	29.8	2.2	
78	13.2	16.0	17.5	7.0	19.5	5.5	21.2	4.9	22.7	4.3	23.8	3.8	20.7	4.6	23.9	3.4	26.7	2.8	29.1	2.4	30.9	2.2	
77	14.3	16.0	18.7	6.7	20.7	5.2	22.4	4.7	23.8	4.2	24.9	3.7	22.1	4.5	25.3	3.3	28.1	2.7	30.3	2.4	32.1	2.2	
75	16.5	14.5	21.2	6.2	23.1	5.0	24.7	4.6	26.1	4.0	27.0	3.6	24.8	4.1	27.9	3.2	30.6	2.6	32.8	2.3	34.4	2.1	
72	19.6	12.3	24.8	5.8	26.6	4.7	28.1	4.3	29.3	3.8	30.2	3.5	28.8	3.8	31.7	3.0	34.3	2.5	36.2	2.2	37.6	2.1	
70	21.7	11.1	27.1	5.6	28.8	4.5	30.3	4.1	31.5	3.7	32.2	3.4	31.4	3.6	34.3	2.9	36.6	2.4	38.5	2.2	39.8	2.0	
68	23.5	10.0	29.4	5.3	31.1	4.4	32.5	3.9	33.5	3.5	34.2	3.3	33.9	3.4	36.7	2.7	38.9	2.3	40.7	2.1	41.9	2.0	
65	26.4	8.5	32.9	5.1	34.4	4.3	35.6	3.7	36.6	3.4	37.1	3.2	37.6	3.1	40.3	2.6	42.4	2.2	43.9	2.0	44.9	1.9	
62	29.2	7.2	36.0	4.5	37.5	3.9	38.7	3.5	39.5	3.3	39.9	3.1	41.2	2.9	43.7	2.4	45.6	2.0	46.9	1.9	47.8	1.9	
60	31.1	6.5	38.1	4.1	39.5	3.8	40.6	3.4	41.4	3.2	41.7	3.0	43.5	2.7	45.9	2.3	47.8	1.95	49.0	1.8	49.6	1.8	
58	32.9	5.9	40.1	3.7	41.5	3.5	42.5	3.1	43.2	3.0	43.4	2.8	45.8	2.6	48.1	2.2	49.7	1.9	50.9	1.8	51.4	1.8	
55	35.4	4.4	43.0	3.2	44.3	3.1	45.2	2.8	45.7	2.7	45.9	2.7	49.1	2.4	51.2	2.1	52.7	1.8	53.6	1.75	53.9	1.7	
52	37.8	3.0	45.8	2.2	46.9	2.1	47.7	2.0	48.1	2.0	48.2	2.0	52.2	1.6	54.1	1.5	55.4	1.4	56.1	1.3	56.2	1.3	
50	39.4	2.25	47.2	1.6	48.4	1.5	49.2	1.4	49.6	1.4	49.5	1.3	55.6	1.1	55.6	1.0	56.9	1.0	57.5	0.9	57.5	0.9	
48	40.9	1.6																					

B = Working radius C = Jib length D = Jib offset E = Boom angle M = Total rated loads

NOTES:

1. The total rated loads shown are for the case when the outriggers are set horizontally on firm ground. The values above the bold lines are based on the crane strength while those below are based on the crane stability.
2. The weights of the slings and hooks are included in the total rated loads shown.
3. The working radii in the above chart are reference values for the case when a jib is mounted on a 50m boom. Jib operations should be performed on the basis of the boom angle.
4. The chart below shows the standard number of part lines for the hook for each jib length.

A	11.3m	6.2 m + 13.3m	6.2 m + 21.3m
H	2	1	1
K	25t Hook	8.5t Hook	
L	450 kg	250 kg	

A = Boom length  
H = No. of part-line  
K = Hook type  
L = Hook weight

[3-stage luffing jib] With 18t counterweight

Unit: ton

E (°)	Outriggers fully extended + Front jack + Rear jack (360°)																						
	6.2m + 13.3m				6.2m + 21.3m				6.2m + 21.3m														
	10°	20°	30°	40°	50°	10°	20°	30°	40°	50°	10°	20°	30°	40°	50°								
	B (m)	M	B (m)	M	B (m)	M	B (m)	M	B (m)	M	B (m)	M	B (m)	M	B (m)	M							
80	10.8	16.0	15.1	8.0	17.1	6.0	18.9	5.0	20.4	4.5	21.6	4.0	17.9	5.0	21.3	3.6	24.2	3.0	26.7	2.5	28.6	2.2	
79	12.0	16.0	16.3	7.5	18.3	5.7	20.1	5.0	21.6	4.4	22.7	4.0	19.3	4.8	22.6	3.5	25.5	2.9	27.9	2.5	29.8	2.2	
78	13.2	16.0	17.5	7.0	19.5	5.5	21.2	4.9	22.7	4.3	23.8	3.8	20.7	4.6	23.9	3.4	26.7	2.8	29.1	2.4	30.9	2.2	
77	14.3	16.0	18.7	6.7	20.7	5.2	22.4	4.7	23.8	4.2	24.9	3.7	22.1	4.5	25.3	3.3	28.1	2.7	30.3	2.4	32.1	2.2	
75	16.5	14.5	21.2	6.2	23.1	5.0	24.7	4.6	26.1	4.0	27.0	3.6	24.8	4.1	27.9	3.2	30.6	2.6	32.8	2.3	34.4	2.1	
72	19.6	12.3	24.8	5.8	26.6	4.7	28.1	4.3	29.3	3.8	30.2	3.5	28.8	3.8	31.7	3.0	34.3	2.5	36.2	2.2	37.6	2.1	
70	21.7	11.1	27.1	5.6	28.8	4.5	30.3	4.1	31.5	3.7	32.2	3.4	31.4	3.6	34.3	2.9	36.6	2.4	38.5	2.2	39.8	2.0	
68	23.3	9.0	29.4	5.3	31.1	4.4	32.5	3.9	33.5	3.5	34.2	3.3	33.9	3.4	36.7	2.7	38.9	2.3	40.7	2.1	41.9	2.0	
65	26.1	6.0	32.7	4.3	34.4	4.3	35.6	3.7	36.6	3.4	37.1	3.2	37.6	3.1	40.3	2.6	42.4	2.2	43.9	2.0	44.9	1.9	
62	28.8	3.8	35.6	2.8	37.2	2.6	38.5	2.5	39.3	2.5	39.8	2.2	40.9	2.0	43.5	1.7	45.5	1.7	46.8	1.5	47.7	1.5	
60	30.5	2.7																					
58	32.3	1.6																					

B = Working radius C = Jib length D = Jib offset E = Boom angle M = Total rated loads

NOTES:

1. The total rated loads shown are for the case when the outriggers are set horizontally on firm ground. The values above the bold lines are based on the crane strength while those below are based on the crane stability.
2. The weights of the slings and hooks are included in the total rated loads shown.
3. The working radii in the above chart are reference values for the case when a jib is mounted on a 50m boom. Jib operations should be performed on the basis of the boom angle.
4. The chart below shows the standard number of part lines for the hook for each jib length.

A	11.3m	6.2 m + 13.3m	6.2 m + 21.3m
H	2		
K	25t Hook	8.5t Hook	
L	450 kg	250 kg	

A = Boom length  
H = No. of part-line  
K = Hook type  
L = Hook weight

[3-stage luffing jib] With 4.5t counterweight

Unit : ton

E (°)	Outriggers fully extended + Front jack + Rear jack (360°)																					
	11.3m		6.2m + 13.3m		6.2m + 13.3m		6.2m + 21.3m		30°		40°		50°									
	B (m)	M	B (m)	M	B (m)	M	B (m)	M	B (m)	M	B (m)	M	B (m)	M								
80	10.3	13.0	15.1	8.0	17.1	6.0	18.9	5.0	20.4	4.5	21.6	4.0	17.9	5.0	21.3	3.6	24.2	3.0	26.7	2.5	28.6	2.2
79	11.4	11.5	16.3	7.5	18.3	5.7	20.1	5.0	21.6	4.4	22.7	4.0	19.3	4.8	22.6	3.5	25.5	2.9	27.9	2.5	29.8	2.2
78	12.4	9.5	17.5	7.0	19.5	5.5	21.2	4.9	22.7	4.3	23.8	3.8	20.7	4.6	23.9	3.4	26.7	2.8	29.1	2.4	30.9	2.2
77	13.3	8.3	18.7	6.7	20.7	5.2	22.4	4.7	23.8	4.2	24.9	3.7	22.1	4.5	25.3	3.3	28.1	2.7	30.3	2.4	32.1	2.2
75	15.5	6.0	21.2	5.8	23.1	4.8	24.7	4.5	26.1	4.0	27.0	3.6	24.8	4.1	27.9	3.2	30.6	2.6	32.8	2.3	34.4	2.1
72	18.5	3.8	24.4	3.6	26.3	3.0	27.9	2.9	29.1	2.7	30.0	2.5	28.8	3.8	31.7	3.0	34.3	2.5	36.2	2.2	37.6	2.1

B = Working radius C = Jib length D = Jib offset E = Boom angle M = Total rated loads

NOTES:

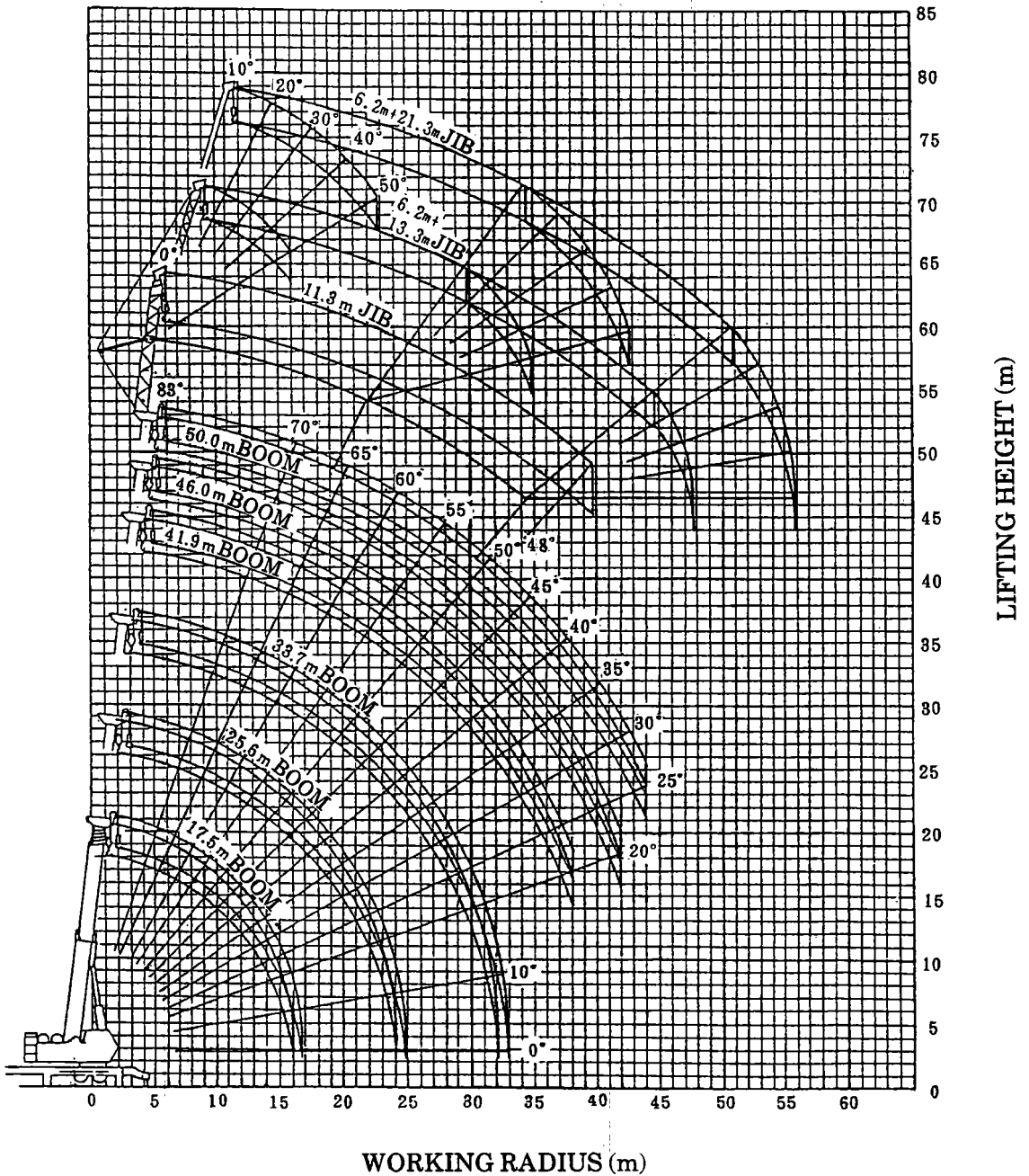
1. The total rated loads shown are for the case when the outriggers are set horizontally on firm ground. The values above the bold lines are based on the crane strength while those below are based on the crane stability.
2. The weights of the slings and hooks are included in the total rated loads shown.
3. The working radii in the above chart are reference values for the case when a jib is mounted on a 50m boom. Jib operations should be performed on the basis of the boom angle.
4. The chart below shows the standard number of part lines for the hook for each jib length.

A	11.3m	6.2 m + 13.3m	6.2 m + 21.3m
H	2		1
K	25t Hook	8.5t Hook	
L	450 kg	250 kg	

A = Boom length  
H = No. of part-line  
K = Hook type  
L = Hook weight

## WORKING RADIUS - LIFTING HEIGHT

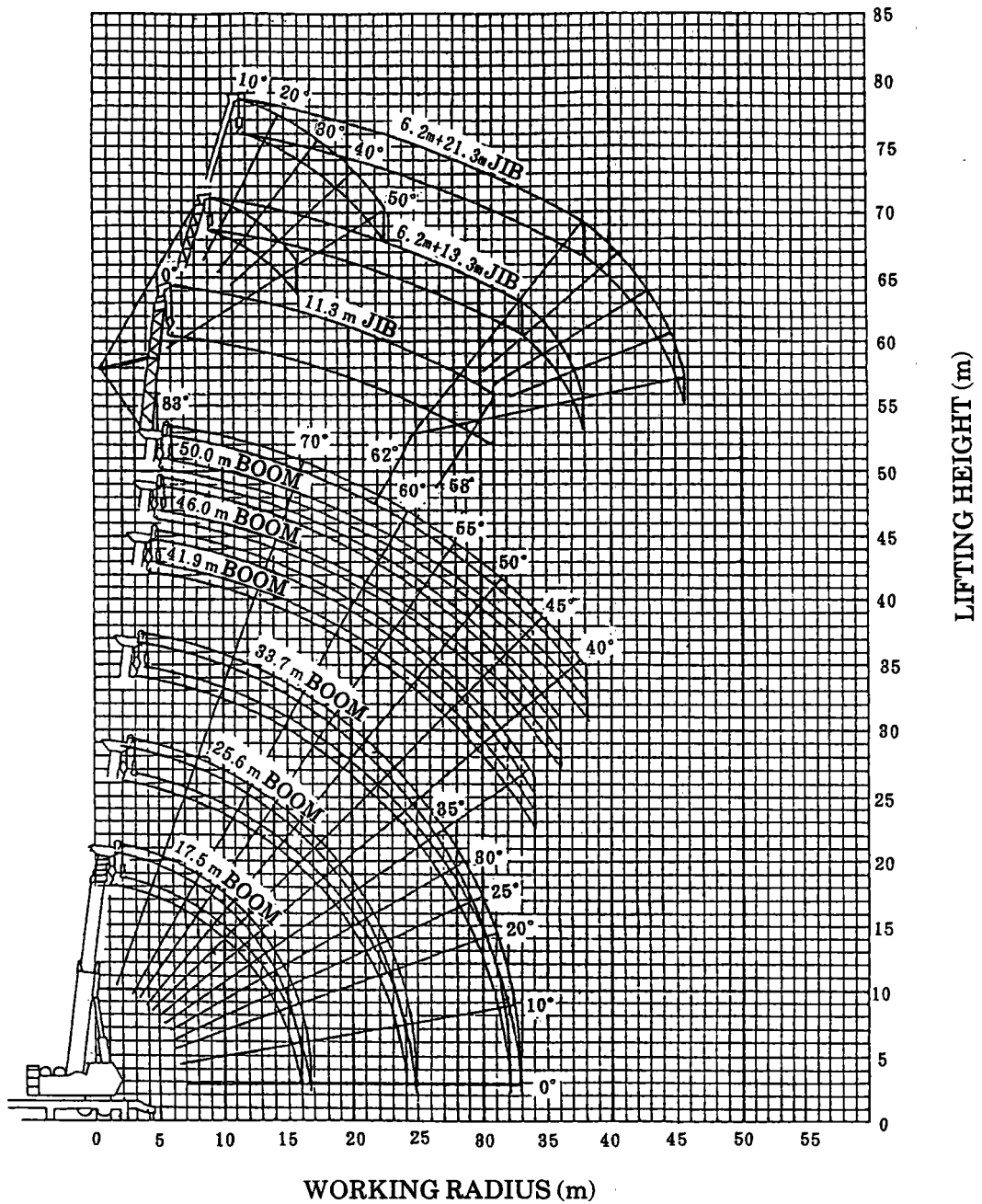
[50m BOOM, 3-STAGE LUFFING JIB] With 35t counterweight



**NOTES:**

1. The deflection of the boom is not incorporated in the figure above.
2. The above chart is for the case where the outriggers are fully extended and where the front and rear jacks are used (over 360°).

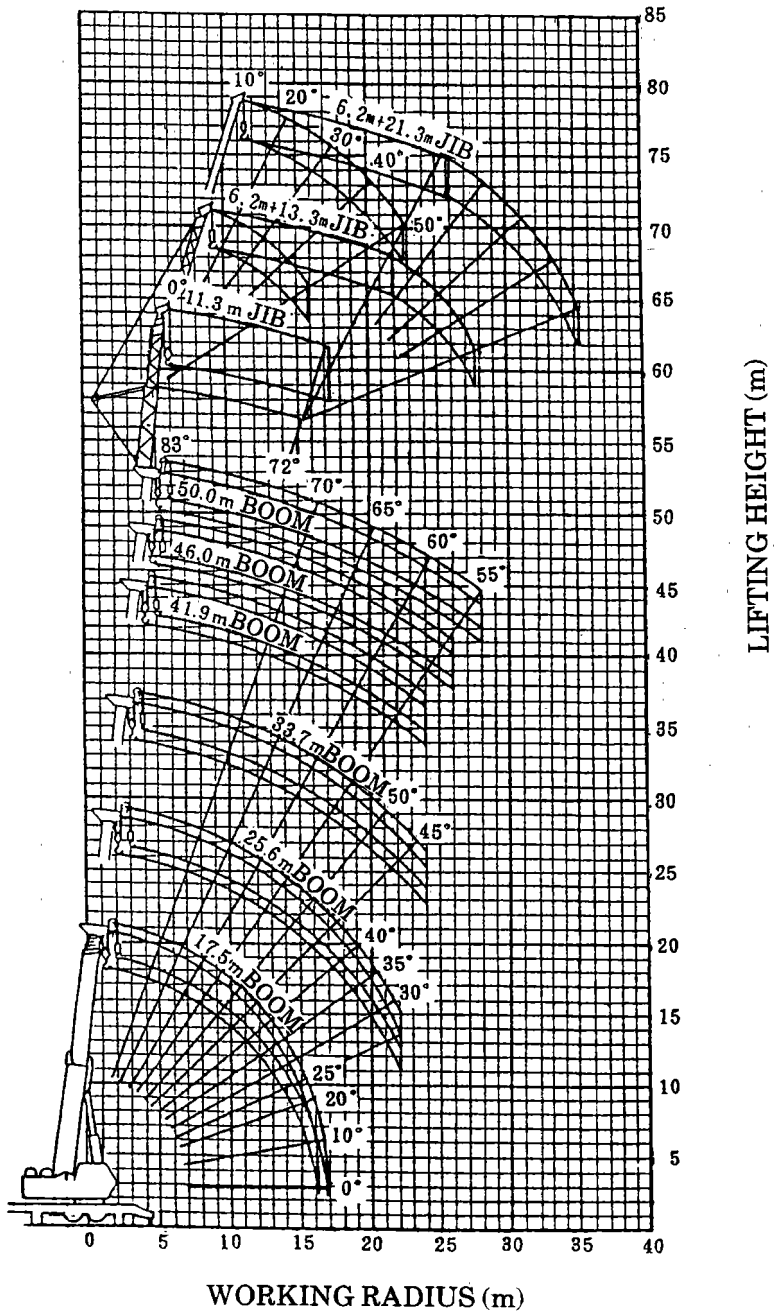
[50m BOOM, 3-STAGE LUFFING JIB] With 18t counterweight



**NOTES:**

1. The deflection of the boom is not incorporated in the figure above.
2. The above chart is for the case where the outriggers are fully extended and where the front and rear jacks are used (over 360°).

[50m BOOM, 3-STAGE LUFFING JIB] With 4.5t counterweight

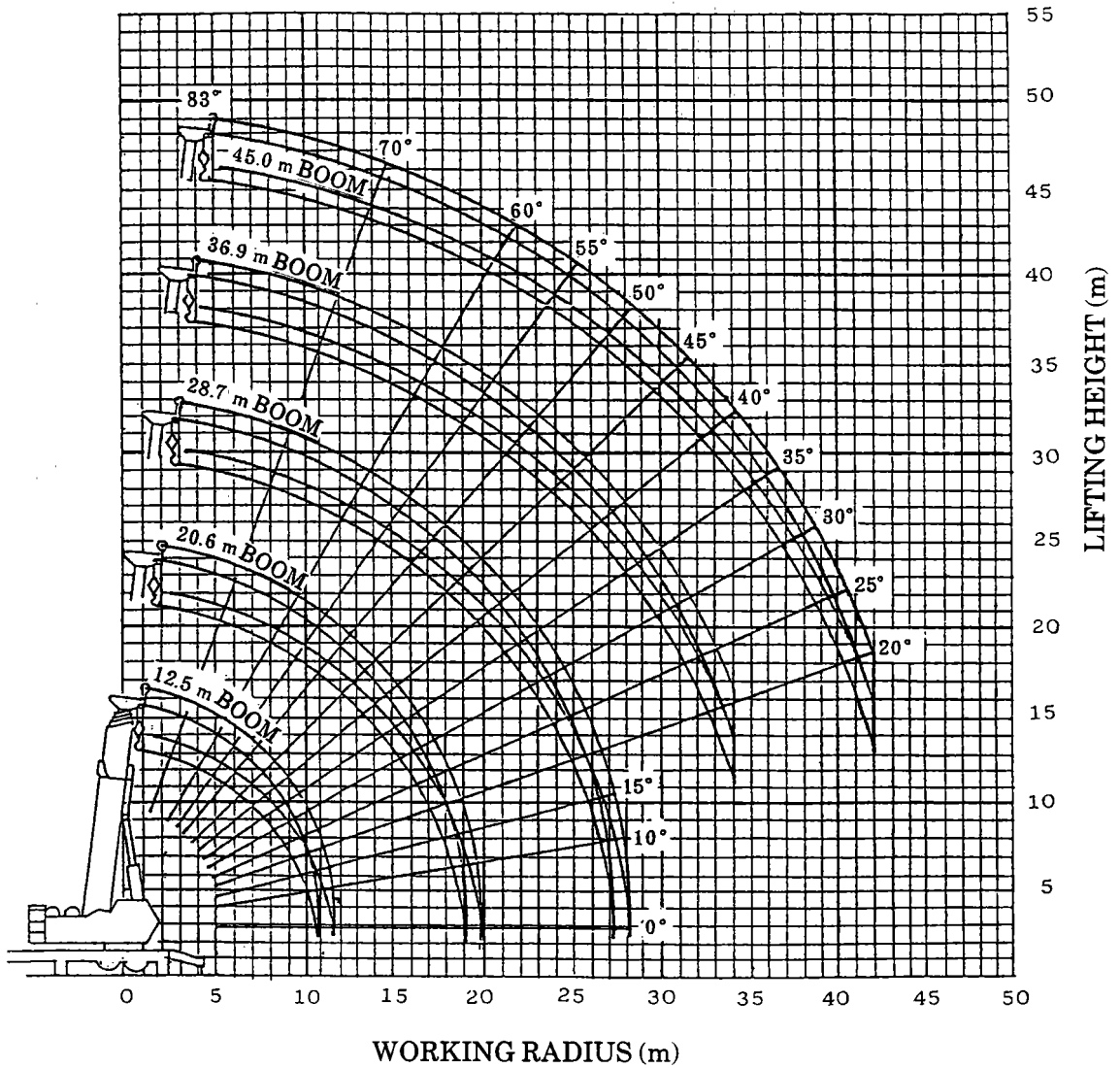


**NOTES:**

1. The deflection of the boom is not incorporated in the figure above.
2. The above chart is for the case where the outriggers are fully extended and where the front and rear jacks are used (over 360°).



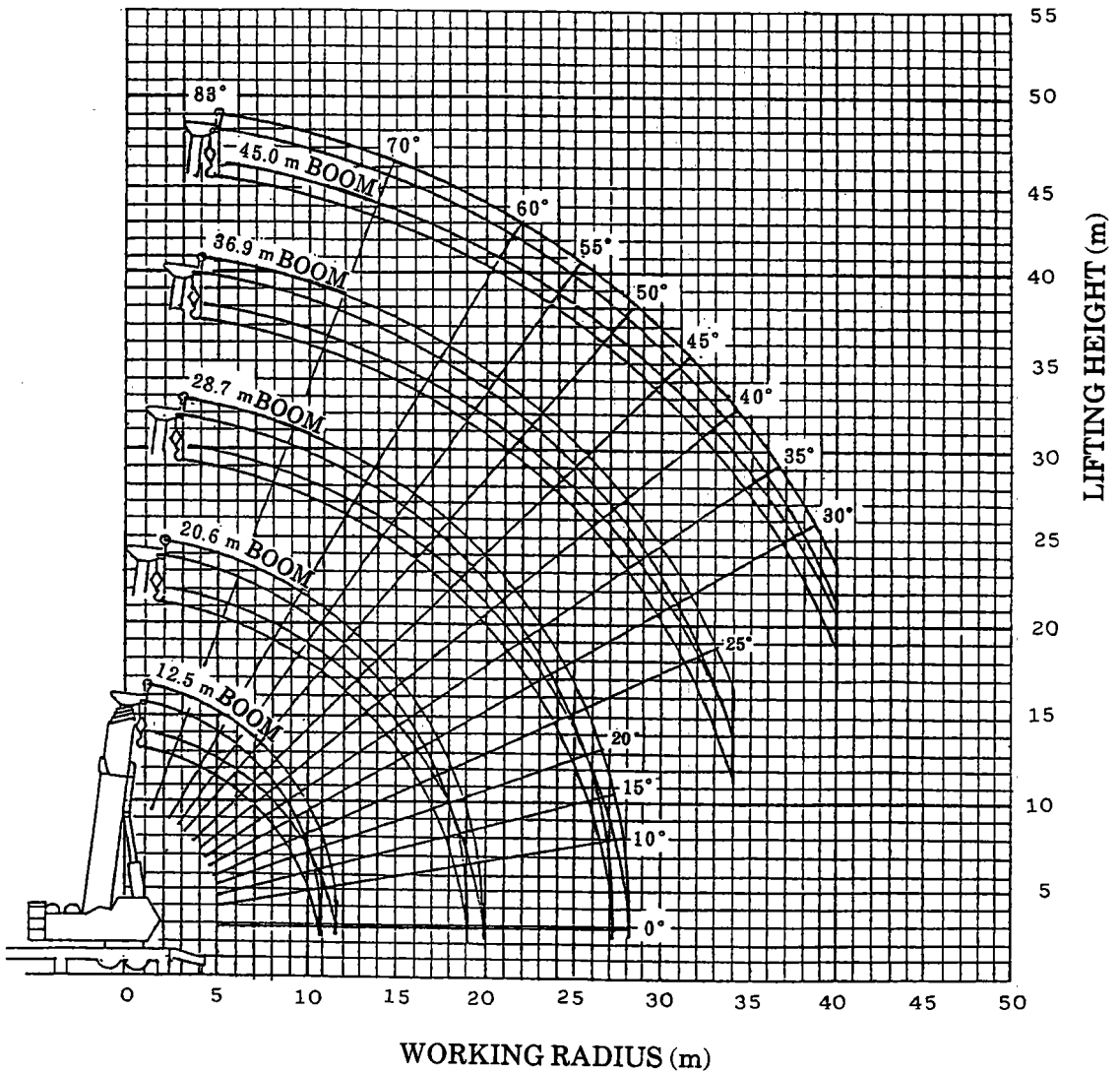
[45m BOOM] With 35t counterweight



**NOTES:**

1. The deflection of the boom is not incorporated in the figure above.
2. The above chart is for the case where the outriggers are fully extended and where the front and rear jacks are used (over 360°).

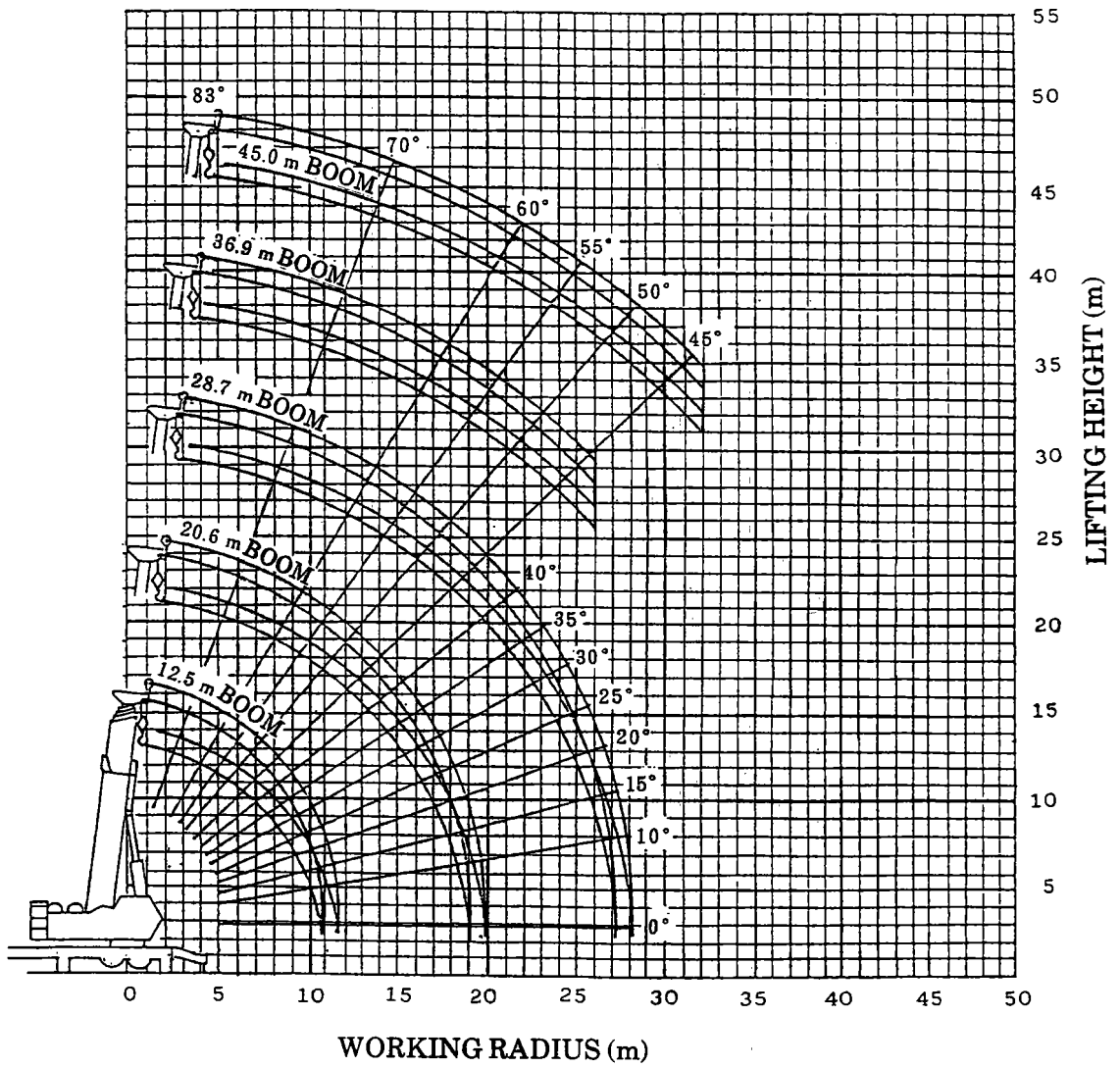
[45m BOOM] With 18t counterweight



**NOTES:**

1. The deflection of the boom is not incorporated in the figure above.
2. The above chart is for the case where the outriggers are fully extended and where the front and rear jacks are used (over 360°).

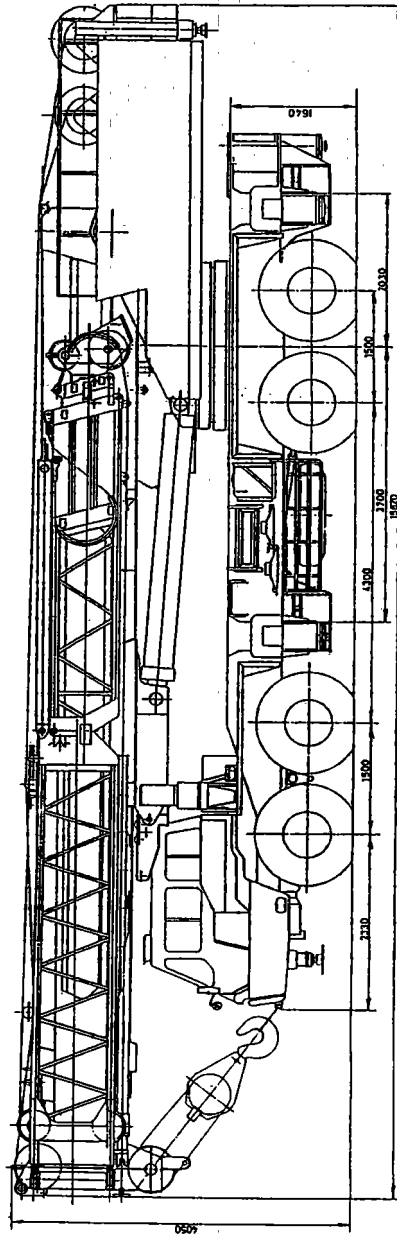
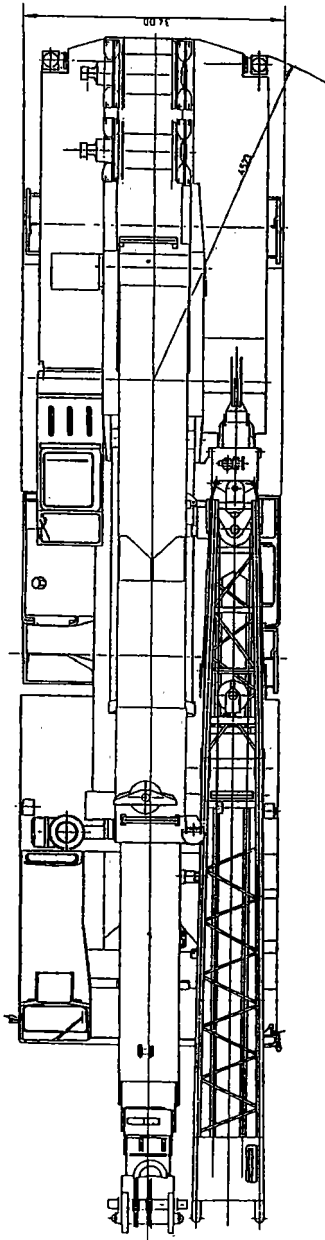
[45m BOOM] With 4.5t counterweight



**NOTES:**

1. The deflection of the boom is not incorporated in the figure above.
2. The above chart is for the case where the outriggers are fully extended and where the front and rear jacks are used (over 360°).

**DIMENSIONS** (1/100)  
[On-site traveling condition]



# TRUCK CRANE

**TG-1600M**

**Optional  
Luffing Jib**

**TG**

*JAPANESE SPECIFICATIONS*

These specifications are for the optional jib for the TG-1600M type crane.

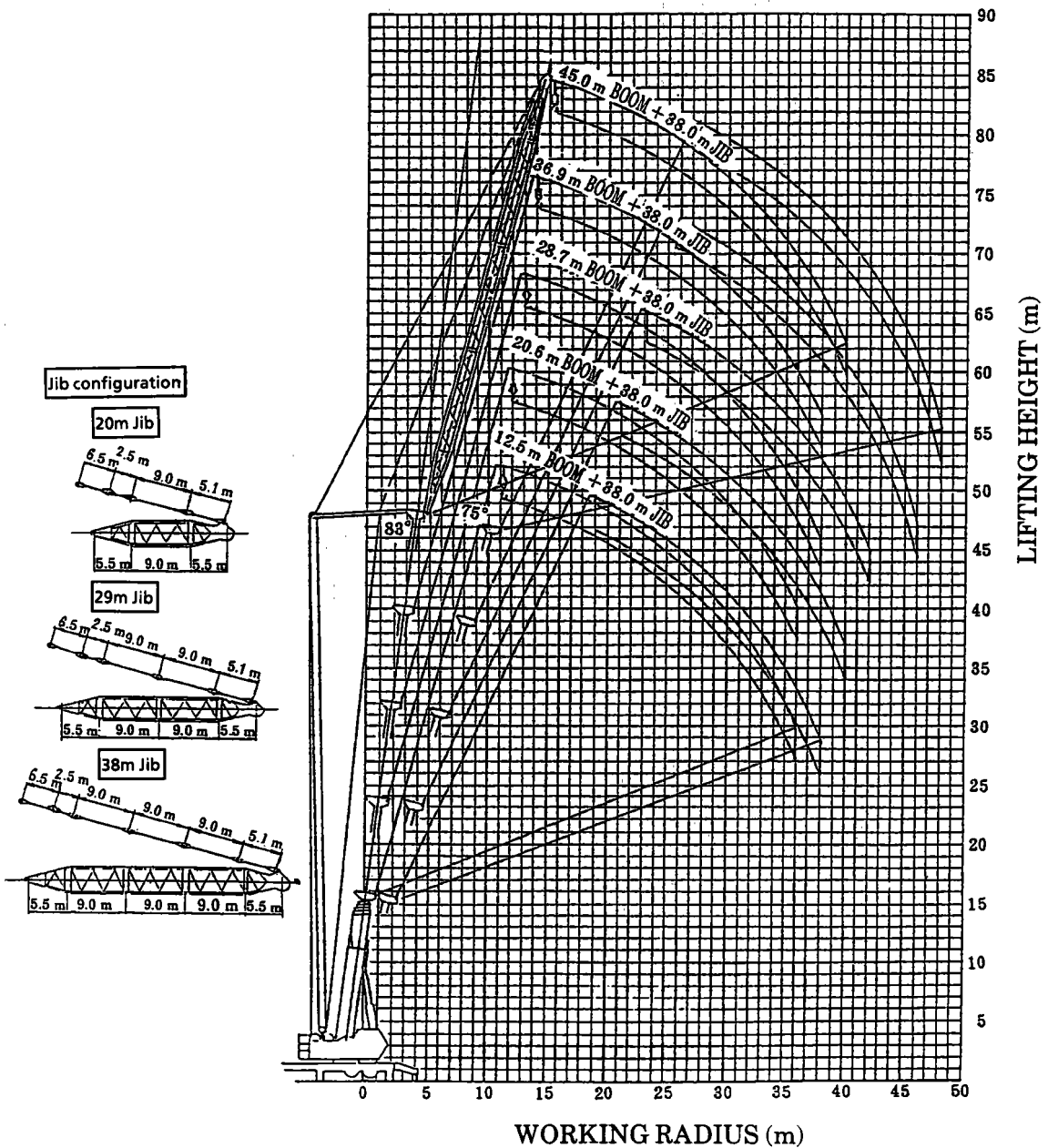
Refer to these specifications along with specification sheet no. TG-1600M-1-10201.

Control No. TG-1600M-LJ-12



# WORKING RADIUS - LIFTING HEIGHT

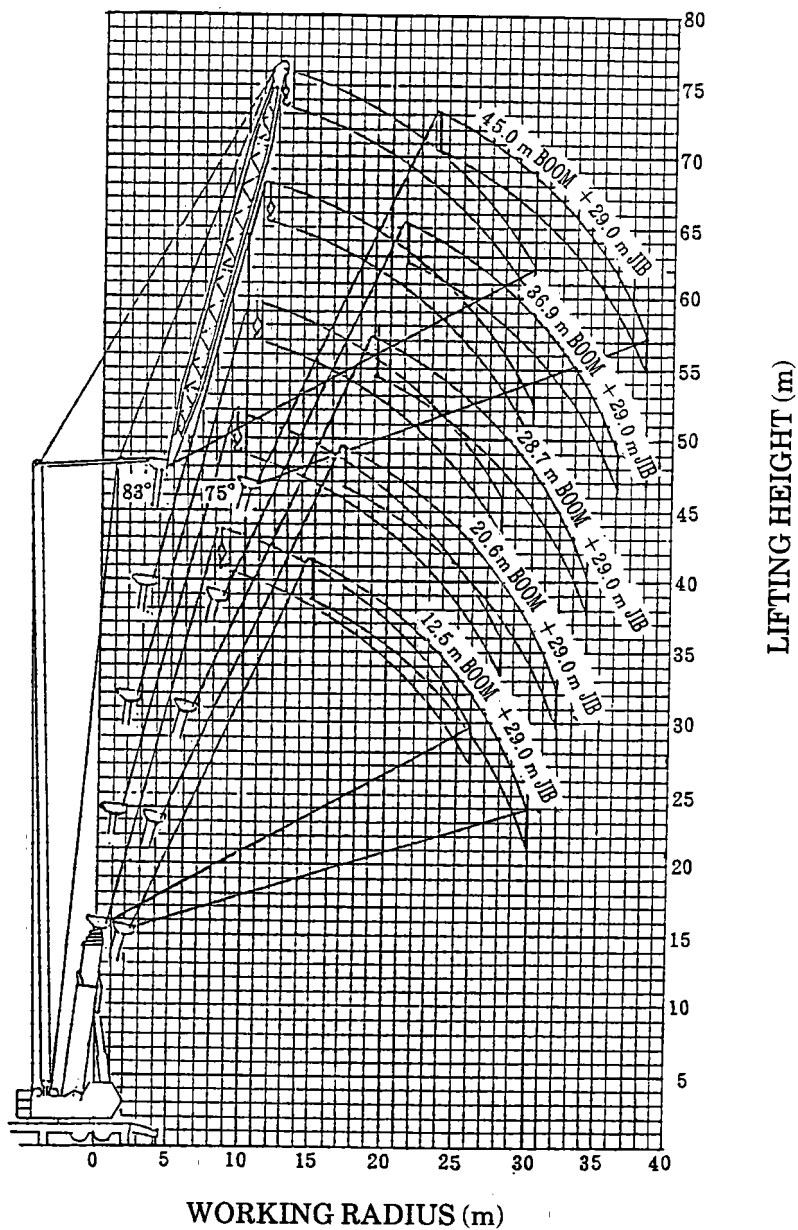
Optional [45m BOOM + 38m LUFFING JIB] With 28t counterweight



**NOTES:**

1. The deflection of the boom is not incorporated in the figure above.
2. The above chart is for the case where the outriggers are fully extended and where the front and rear jacks are used (over 360°).

Optional [45m BOOM + 29m LUFFING JIB] With 28t counterweight

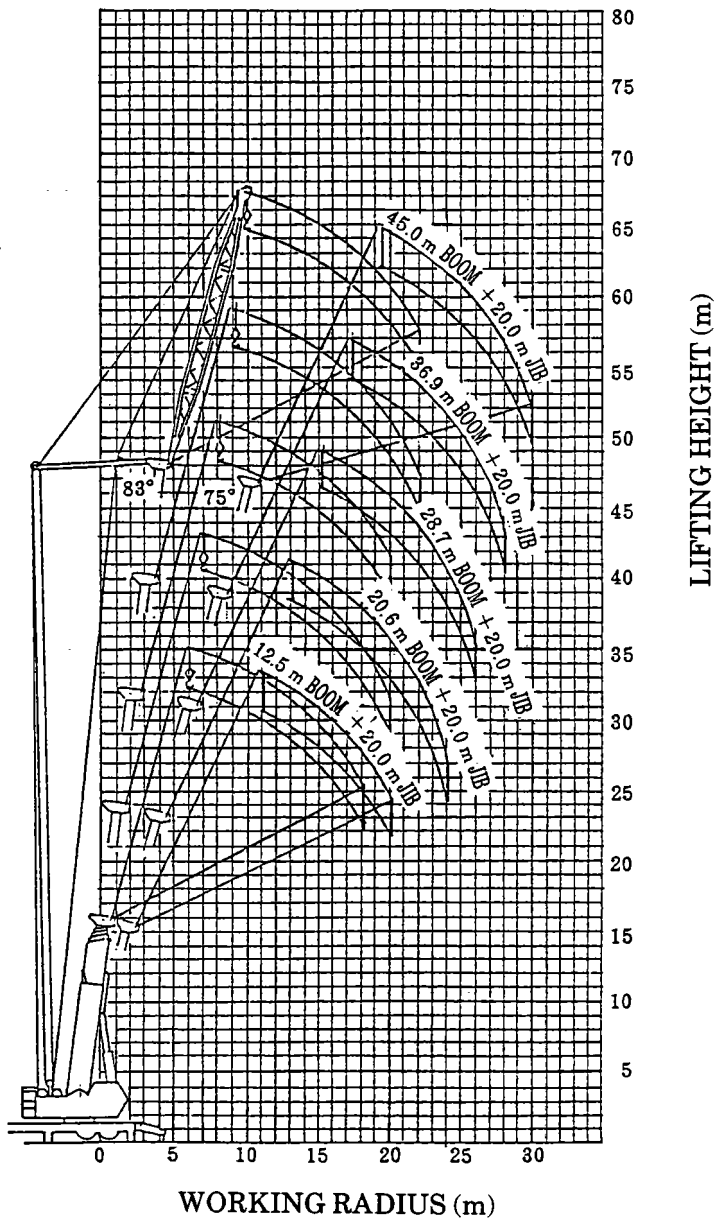


**NOTES:**

1. The deflection of the boom is not incorporated in the figure above.
2. The above chart is for the case where the outriggers are fully extended and where the front and rear jacks are used (over 360°).



Optional [45m BOOM + 20m LUFFING JIB] With 28t counterweight



**NOTES:**

1. The deflection of the boom is not incorporated in the figure above.
2. The above chart is for the case where the outriggers are fully extended and where the front and rear jacks are used (over 360°).

◆ MEMO ◆

A series of horizontal dashed lines for writing.