

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

Jib 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 θ) 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 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	17.3	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	27.8	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 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 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
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.

[45m BOOM] With 4.5t counterweight

Unit : ton

Outriggers fully extended + Front jack + Rear jack (360°)					
A \ B (m)	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 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.

[3-stage luffing jib] With 35t counterweight

Unit : ton

		Outriggers fully extended + Front jack + Rear jack (360°)												6.2m + 21.3m									
		11.3m				6.2m + 13.3m				20°				30°				40°				50°	
C	D	0°		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	B (m)	M	B (m)	M	B (m)	M
E (°)																							
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:

- 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 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.
- 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

[3-stage luffing jib] With 18t counterweight

Unit: ton

		Outriggers fully extended + Front jack + Rear jack (360°)												6.2m + 21.3m											
		11.3m				6.2m + 13.3m				20°				30°				40°				50°			
		0°		10°		20°		30°		40°		50°		10°		20°		30°		40°		50°			
E (°)	B (m)	M		B (m)		M		B (m)		M		B (m)		M		B (m)		M		B (m)		M			
		B	M	B	M	B	M	B	M	B	M	B	M	B	M	B	M	B	M	B	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	4.5	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 = Hk length

D = Hk offset

E = Boom angle

M = Total rated load

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

Unit: ton

C D		Outriggers fully extended + Front jack + Rear jack (360°)																				
		11.3m					6.2m + 13.3m					6.2m + 21.3m										
0°		10°		20°		30°		40°		50°		10°		20°		30°		40°		50°		
E (°)	B (m)	M	B (m)	M	B (m)	M	B (m)	M	B (m)	M	B (m)	M	B (m)	M	B (m)	M	B (m)	M	B (m)	M	B (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:

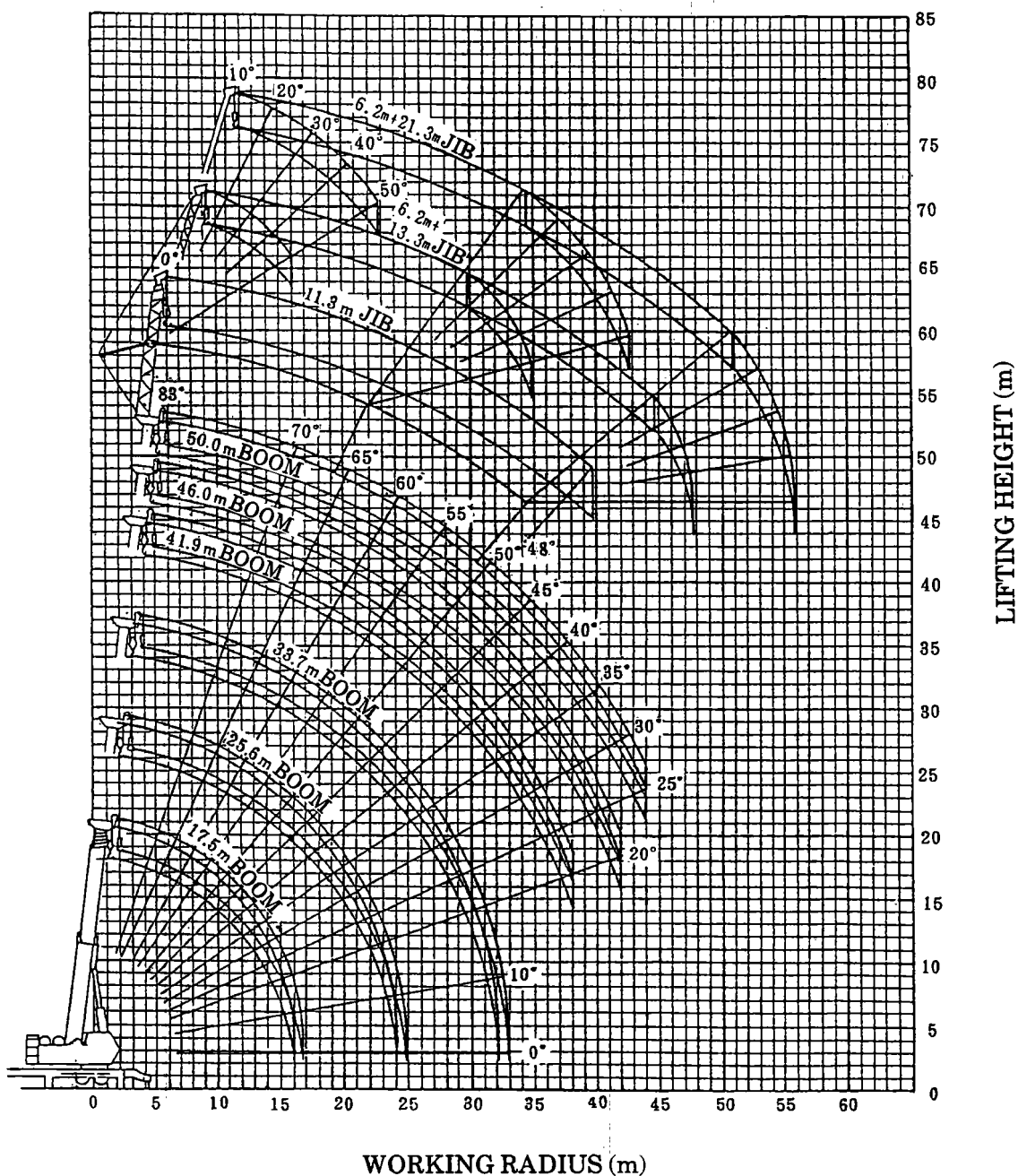
1. The total rated loads shown are for the case when the outriggers are set horizontally on firm ground. The values above the bold lines are based on the crane strength while those below are based on the crane stability.
2. The weights of the slings and hooks are included in the total rated loads shown.
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

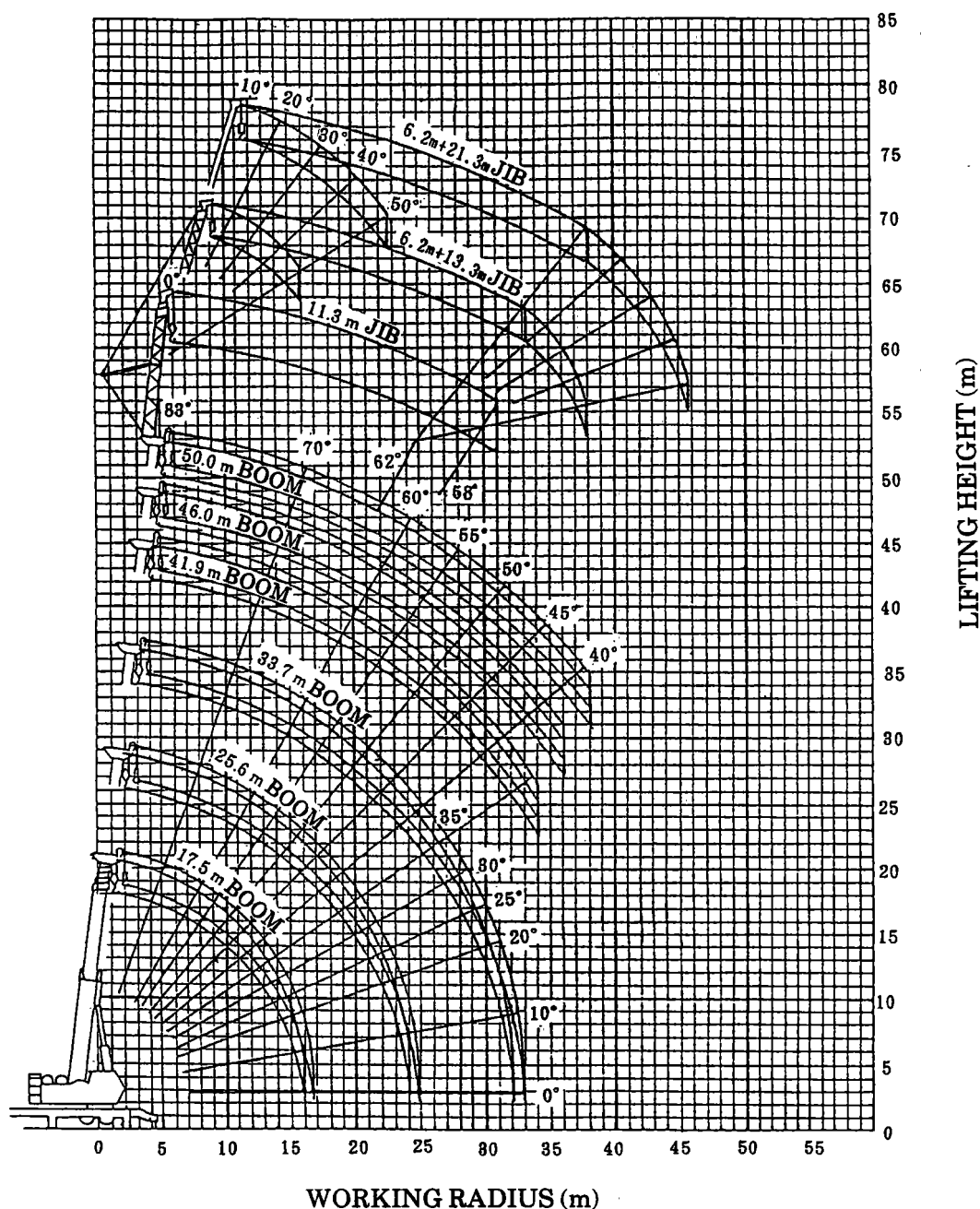
[50m BOOM, 3-STAGE LUFFING JIB] With 35t counterweight



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°).

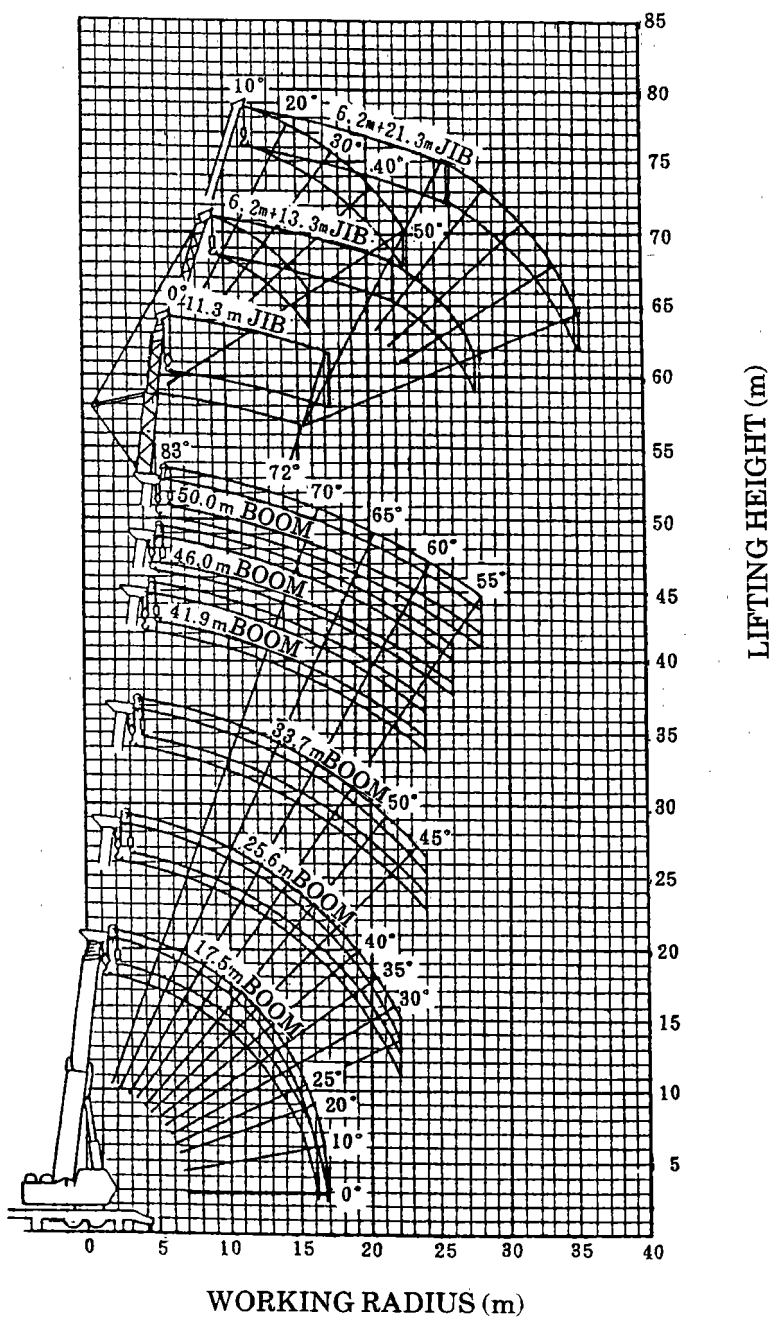
[50m BOOM, 3-STAGE LUFFING JIB] With 18t counterweight



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°).

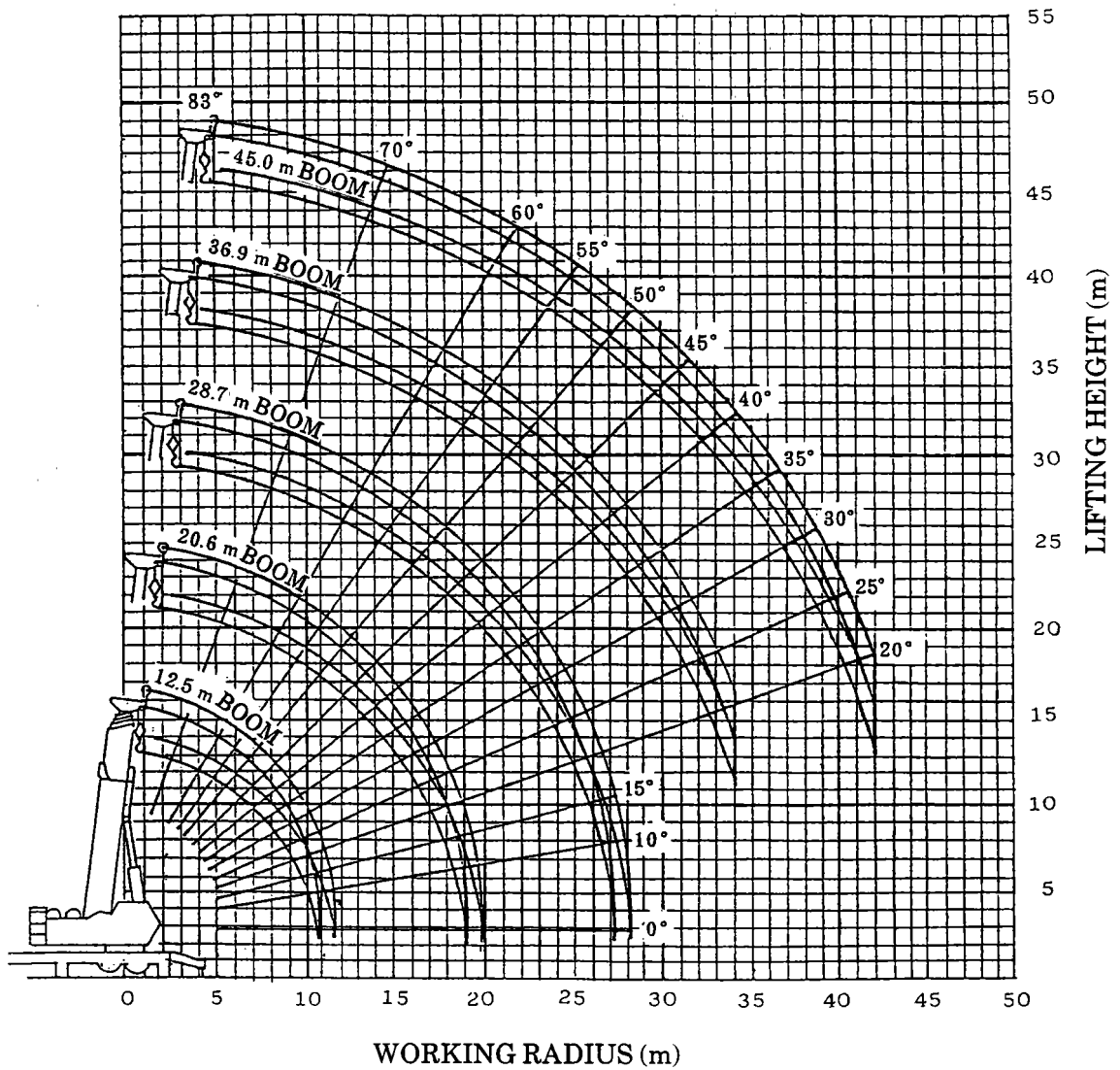
[50m BOOM, 3-STAGE LUFFING JIB] With 4.5t counterweight



NOTES:

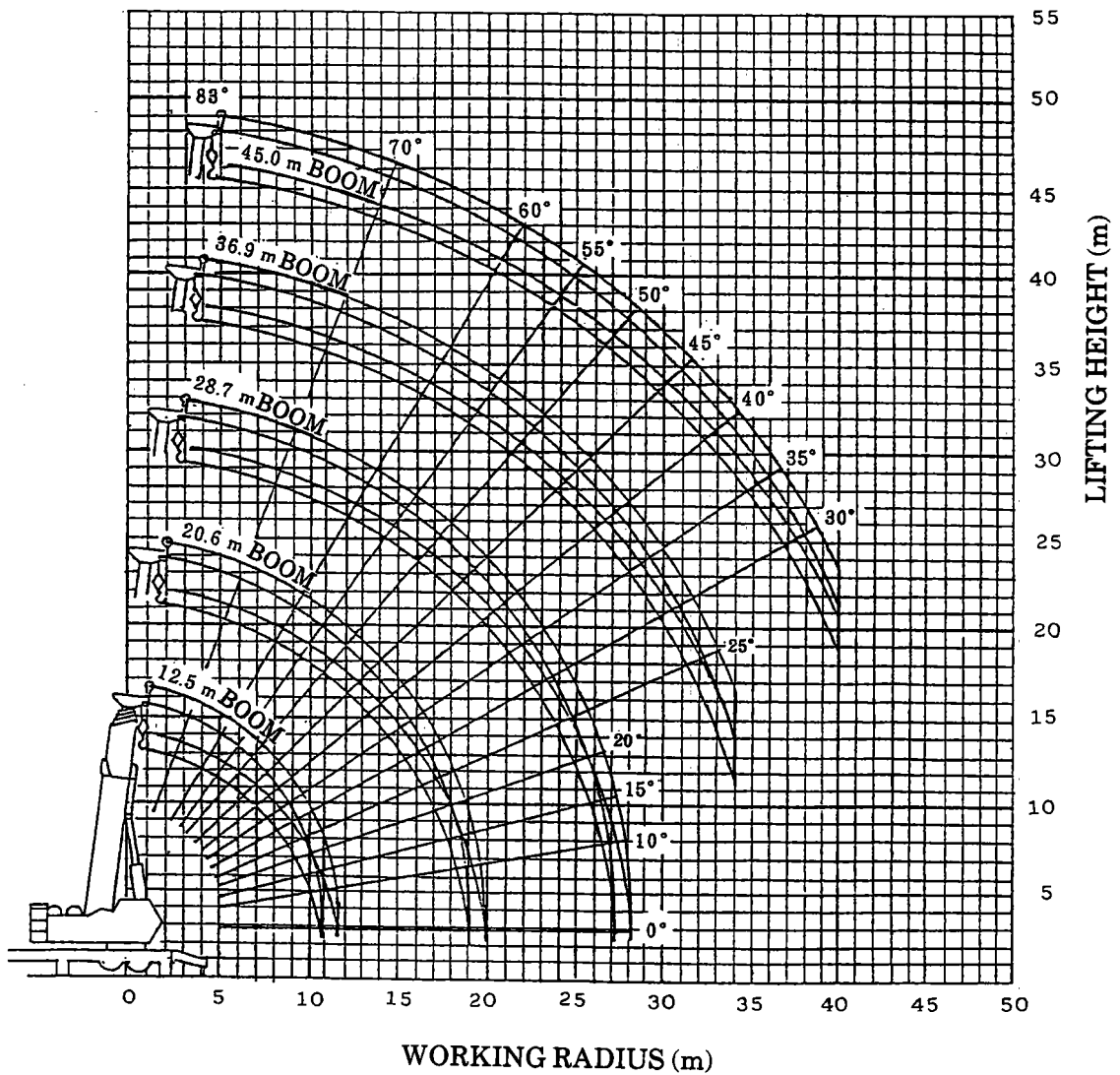
1. The deflection of the boom is not incorporated in the figure above.
2. The above chart is for the case where the outriggers are fully extended and where the front and rear jacks are used (over 360°).

[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°).

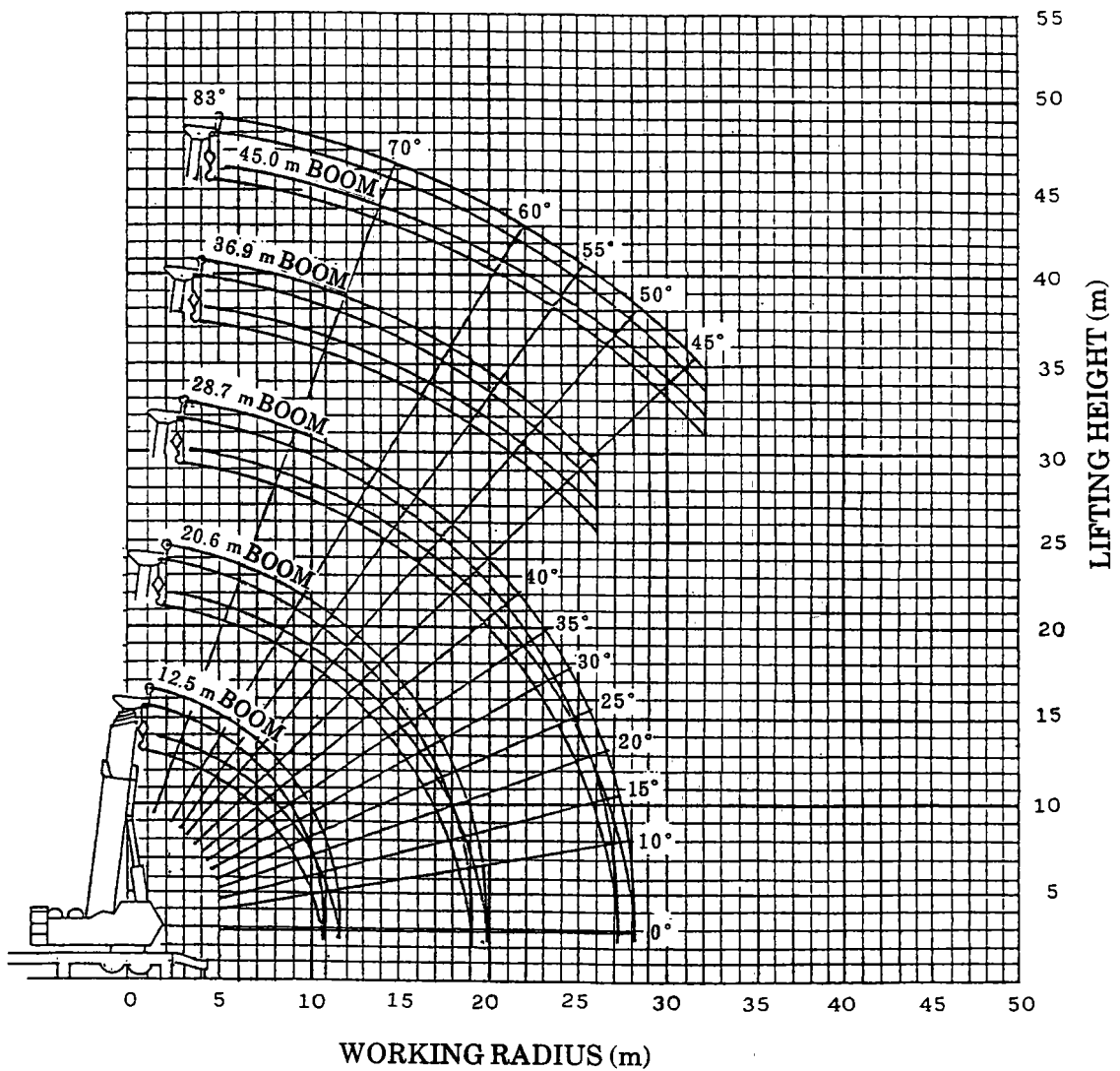
[45m BOOM] With 18t counterweight



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°).

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

TOTAL RATED LOADS

[LUFFING JIB] With 28t counterweight

Unit : ton

Outriggers fully extended + Front jack + Rear jack (360°)																	Unit: ton																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
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A = Boom length B = Working radius C = Jib length E = Boom angle

NOTES:

- The total rated loads shown are for the case when the outriggers are set horizontally on firm ground. The values are based on the crane strength.
- The weights of slings and hooks (940kg for a 65 ton capacity hook, 450kg for a 25 ton capacity hook and 250kg for a 8.5 ton capacity hook) 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.
- Use 6 part lines (main winch) to elevate the jib when using a boom with a length from 12.5m to 86.9m. Use 4 part lines when using the 45m boom.
- Be sure to fix the top boom and the force boom with a pin when using the 45m boom.
- The chart below shows the number of part lines for the hook for each boom and jib length.

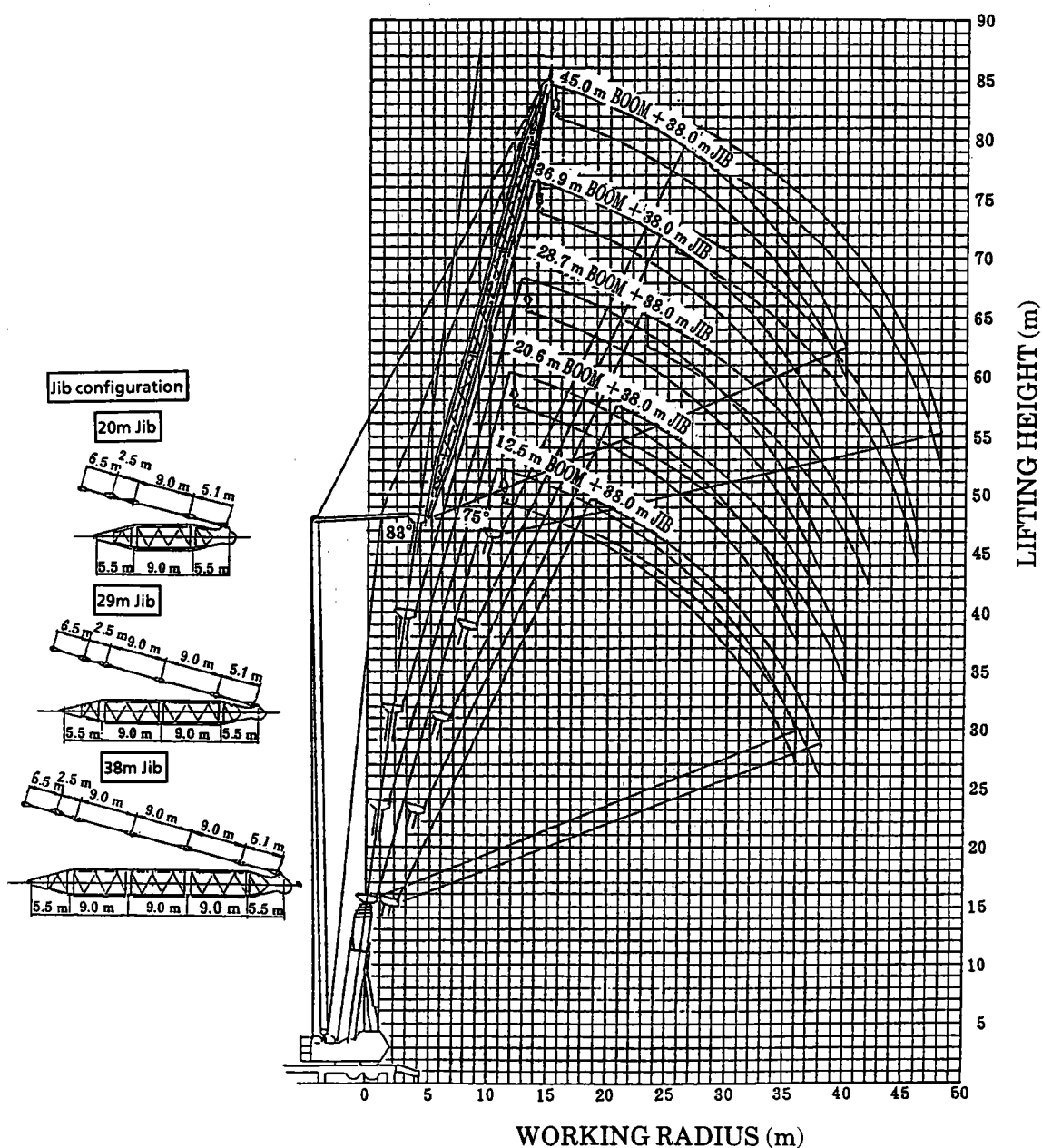
C	A	12.5m	20.6m	28.7m	36.9m	45.0m
20m	5 part-line	4 part-line	3 part-line	3 part-line	2 part-line	1 part-line
29m	4 part-line	3 part-line	3 part-line	2 part-line	1 part-line	1 part-line
38m	2 part-line	2 part-line	2 part-line	1 part-line	1 part-line	1 part-line

A = Boom length C = Jib length

5 part-line, 4 part-line — 65t Hook
 3 part-line, 2 part-line — 25t Hook
 1 part-line — 8.5t Hook

WORKING RADIUS - LIFTING HEIGHT

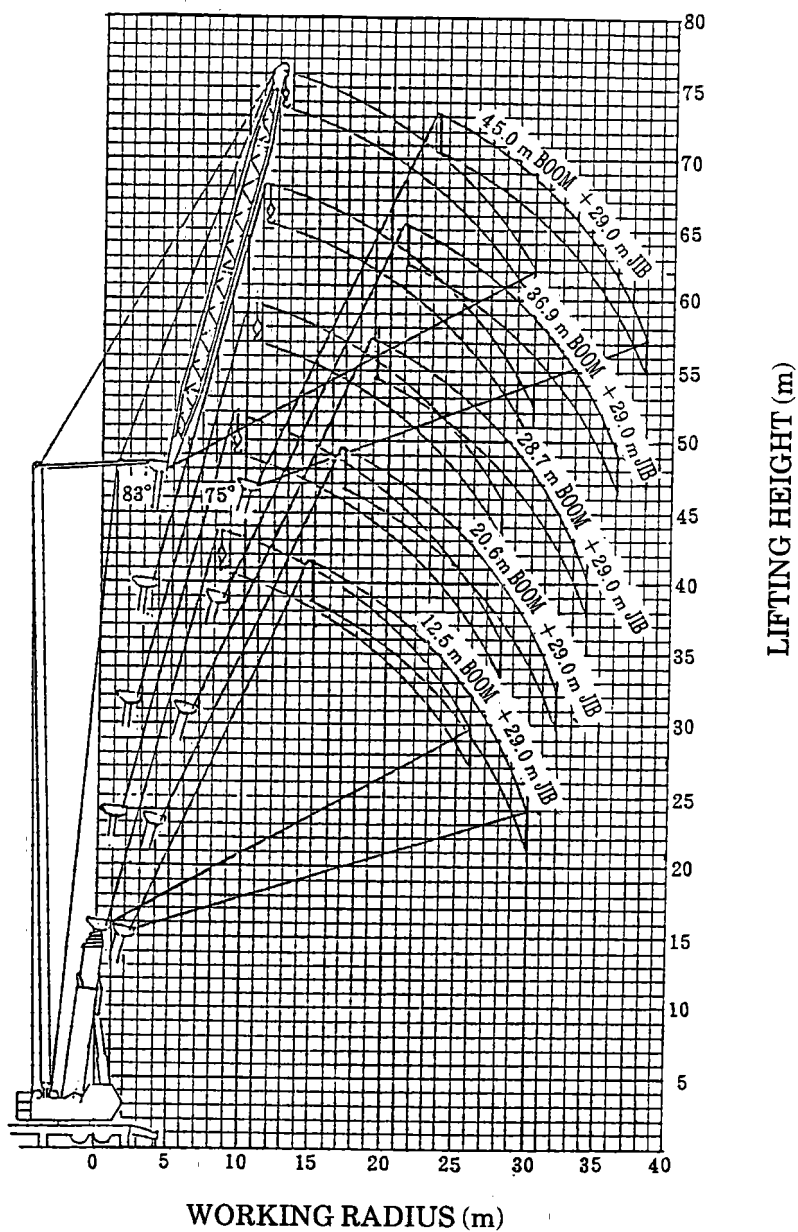
Optional [45m BOOM + 38m LUFFING JIB] With 28t counterweight



NOTES:

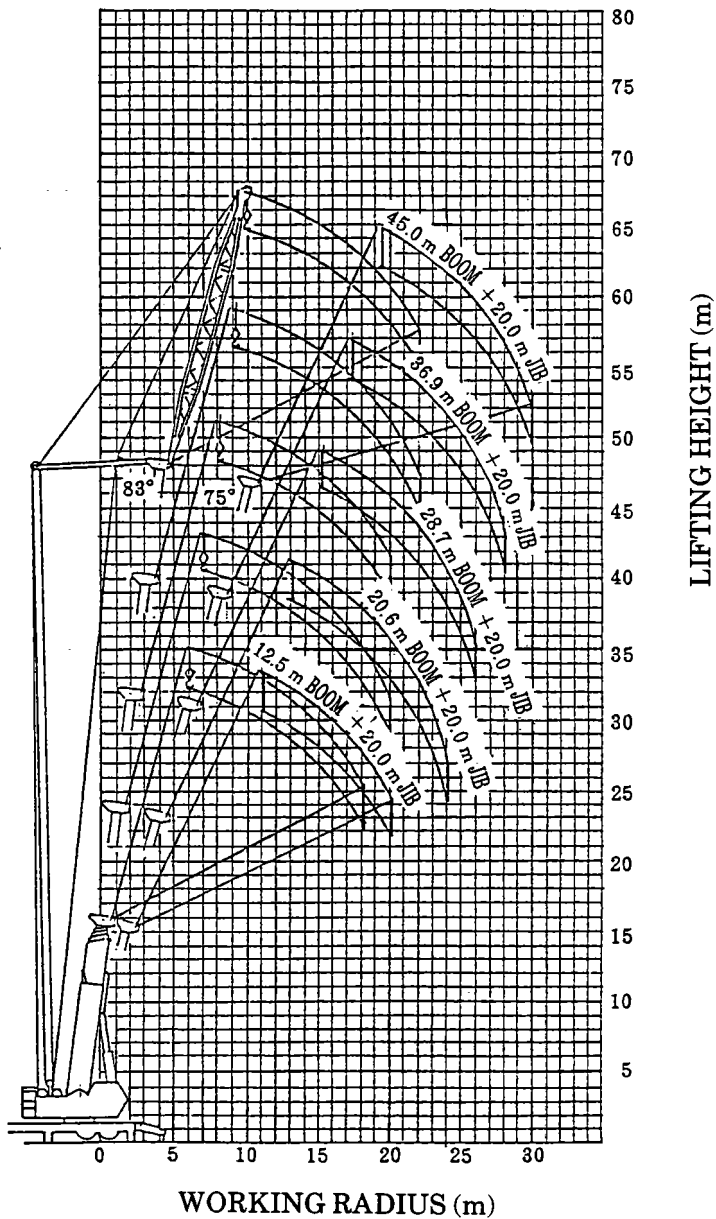
1. The deflection of the boom is not incorporated in the figure above.
2. The above chart is for the case where the outriggers are fully extended and where the front and rear jacks are used (over 360°).

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 ◆

Lined area for writing the memo.