

TRUCK CRANE

TG-350M

TG

JAPANESE SPECIFICATIONS

CARRIER MODEL	OUTLINE	SPEC. NO.
NISSAN DIESEL K-KG51T	4-section Boom, 2-stage Jib	TG-350M-1-10101

Control No. JA-01

TG-350M

CRANE SPECIFICATIONS

MAXIMUM TOTAL RATED LOAD

Boom	10.4m	35,000kg
	17.6m	23,500kg
	24.8m	15,000kg
	32.0m	10,000kg
Jib	9.0m	4,000kg
	14.5m	2,700kg
Single top	0.7m	4,000kg

(9 part-line)
(6 part-line)
(4 part-line)
(4 part-line)
(1 part-line)
(1 part-line)
(1 part-line)

MAX. LIFTING HEIGHT

Boom	31.5m
Jib	46.0m
Single top	32.0m

MAX. WORKING RADIUS

Boom	29.0m
Jib	36.0m
Single top	30.0m

BOOM LENGTH

10.4m – 32.0m

BOOM EXTENSION

21.6m

BOOM EXTENSION SPEED

21.6m / 110s

JIB LENGTH

9.0m, 14.5m

MAIN WINCH SINGLE LINE SPEED

High range:	113m/min	(3rd layer)
Low range:	64m/min	(3rd layer)

MAIN WINCH HOOK SPEED

(9 part-line)

High range:	12.5m/min	(3rd layer)
Low range:	7.1m/min	(3rd layer)

AUXILIARY WINCH SINGLE LINE SPEED

106m/min (2nd layer)

AUXILIARY WINCH HOOK SPEED

(1 part-line) 106m/min (2nd layer)

BOOM ELEVATION ANGLE

-3° – 81°

BOOM ELEVATION SPEED

-3° – 81° / 65s

SWING ANGLE

360° continue

SWING SPEED

2.2 rpm

WIRE ROPE

Main Winch

IWRC 6×F(29)

Class C (Spin-resistant type)

18mm × 175m (Diameter×Length)

Breaking strength 24.3t

Auxiliary Winch

IWRC 6×F(29)

Class C (Spin-resistant type)

18mm × 100m (Diameter×Length)

Breaking strength 24.3t

BOOM

4-section fully hydraulically synchronized telescoping boom of box construction.

BOOM EXTENSION

3 double-acting hydraulic cylinder

JIB

2-staged swingaround boom extensions.
(2nd stage: pull-out type)
Dual (5°, 30°) offset

SINGLE TOP

Single sheave. Mounted to main boom head for single line work. (attached with a 15° tilt)

HOIST

Driven by hydraulic motor and via spur gear speed reducer.
Power load lowering / free-fall lowering 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 (floats mounted integrally)

Slides and jacks each provided with independent operation device.

Full extended width 6.3m

Middle extended width 4.0m

MAX. OUTRIGGER LOAD

38.0t

HYDRAULIC PUMPS

Type 3 gear pumps

Pressure 210kg/cm², 210kg/cm², 210kg/cm²

HYDRAULIC OIL TANK CAPACITY

602.5 liters (when oil temperature is 20°C)

SAFETY DEVICES

Automatic moment limiter

- Moment display
- Load display
- Total rated load display
- Boom angle display
- Boom length display
- Max. lifting height display
- Working radius display

Over-winding cutout

Level gauge

Over front area control device

Hook safety latch

Winch drum lock

Swing brake

Hydraulic safety valve

Elevation counterbalance valve

Telescopic counterbalance valve

Jack pilot check valve

EQUIPMENTS

Oil cooler

Hydraulic oil temperature gauge

Boom angle indicator

Crane cab heater 1,400Kcal/H

CARRIER SPECIFICATIONS**MANUFACTURER**

NISSAN DIESEL MOTOR CO., LTD

CARRIER MODEL

K-KG51T

ENGINE

Model RD8

Type 4-cycle, vertical 8-cylinder, direct-injection water-cooled diesel engine

Piston displacement 14,313cc

Max. output 300PS at 2,500rpm

Max. torque 100kg-m at 1,400rpm

CLUTCH

Dry single-plate coil spring type

TRANSMISSION

Type Synchronized-mesh gear

Gear ratios 1st speed 6.833 2nd speed 4.134

3rd speed 2.530 4th speed 1.550

5th speed 1.000 Reverse 6.865

AUXILIARY TRANSMISSION

Type Directly coupled to synchromesh transmission

Gear ratios High range 1.000 Low range 1.277

REDUCER

Type Hypoid gear type

Final drive 6.833

FRONT AXLE

Reverse Elliot-type steel pipe cross section

REAR AXLE

Full-floating type, cast-steel housing

SUSPENSION

Front Laminated leaf spring type

Rear Equalizer and torque rods

STEERING

Recirculating screw type

BRAKE SYSTEM

Service Brake

2-circuit air brake

Parking Brake

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

Auxiliary Brake

Electro-pneumatic operated exhaust brake

FRAME

Lattice type, box type, all-welded structure

ELECTRIC SYSTEM

2 batteries of 12V (120Ah)

FUEL TANK CAPACITY

300 liters

CAB

Two-man type

TIRES

Front 12.00-20-18PR

Rear 11.00-20-14PR

STANDARD EQUIPMENTS

Car heater

Car radio

GENERAL DATA**DIMENSIONS**

Overall length 13,230mm

Overall width 2,750mm

Overall height 3,600mm

Wheel base 1,470mm + 3,780mm + 1,400mm = 6,650mm

Tread Front 2,215mm

Rear 2,110mm

WEIGHTS

Vehicle weight

Total 34,490kg

Front 12,860kg

Rear 21,630kg

Gross vehicle weight

Total 34,600kg

Front 13,000kg

Rear 21,600kg

PERFORMANCE

Max. traveling speed 70km/h

Gradeability (tan θ) 0.29

Min. turning radius (Outermost wheel) 11.8m

TOTAL RATED LOADS

Unit : ton

Outriggers fully extended (Over rear · Over sides)									
B (m) \ A					E (°) \ C	9.0 m		14.5 m	
	10.4 m	17.6 m	24.8 m	32.0 m		D	5°	30°	5°
3.0	35.00	23.50			80.0	4.00	2.00	2.70	1.20
3.5	32.50	23.50			78.0	4.00	2.00	2.70	1.20
4.0	30.00	23.50			75.0	4.00	2.00	2.23	1.20
4.5	27.60	23.50			72.0	3.37	2.00	1.98	1.20
5.0	25.20	21.80	15.00		71.0	3.22	2.00	1.90	1.16
5.5	23.20	20.30	15.00		70.0	3.08	1.94	1.82	1.13
6.0	21.60	18.90	15.00	10.00	68.0	2.85	1.84	1.68	1.06
6.5	18.60	17.70	14.60	10.00	65.0	2.53	1.69	1.48	1.00
7.0	16.40	16.60	14.30	10.00	62.0	2.30	1.57	1.34	0.97
7.5	14.50	14.80	13.50	10.00	60.0	2.15	1.50	1.23	0.95
8.0	13.00	13.30	12.80	10.00	58.0	1.85	1.45	1.15	0.94
9.0	10.60	11.10	11.30	9.15	55.0	1.40	1.30	1.04	0.92
10.0		9.40	9.50	8.30	52.0	1.10	1.00	0.90	0.75
11.0		8.00	8.10	7.60	50.0	0.90	0.80	0.75	0.60
12.0		6.80	7.00	6.95	48.0	0.70	0.60	0.60	0.45
14.0		5.20	5.30	5.40	45.0	0.50	0.40	0.40	0.30
16.0		3.90	4.10	4.20					
18.0			3.20	3.30					
20.0			2.45	2.60					
22.0			1.90	2.00					
23.0			1.60	1.70					
24.0				1.50					
26.0				1.10					
28.0				0.70					
29.0				0.50					

- A = Boom length
- B = Working radius
- C = Jib length
- D = Jib offset
- E = Boom angle

NOTES:

1. 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.
2. The weights of slings and hooks (350kg for a 35 ton capacity hook and 100kg for a 4 ton capacity hook) 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 number of part lines for each boom length should not exceed the values below. The load per line should not exceed 4 tons for both the main winch and the auxiliary winch.

A	10.4 m	17.6 m	24.8 m	32.0 m	J
H	9	6	4	4	1

A = Boom length H = No. of part-line J = Jib / Single top

5. The total rated loads for free-fall operations is 1/5 of the total rated loads given above. The load per line should not exceed 0.8 ton for both the main winch and the auxiliary winch.
6. The total rated load for the single top is the same as that of the main boom and must not exceed 4 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.

Unit : ton

B (m) \ A	Outriggers middle extended (Over front)				Without outriggers (Over rear) 10.4 m BOOM
	10.4m	17.6m	24.8m	32.0m	
3.0	24.00	16.00			8.00
3.5	24.00	16.00			6.40
4.0	24.00	16.00			5.10
4.5	19.30	16.00			4.20
5.0	15.60	16.00	11.00		3.40
5.5	13.00	13.70	11.00		2.80
6.0	10.90	11.60	11.00	7.00	2.30
6.5	9.40	10.00	10.00	7.00	1.90
7.0	8.10	8.70	8.90	7.00	1.60
7.5	7.10	7.70	7.90	7.00	1.25
8.0	6.20	6.80	7.00	7.00	1.00
9.0	4.80	5.40	5.60	5.70	
10.0		4.30	4.50	4.70	
11.0		3.50	3.70	3.80	
12.0		2.90	3.10	3.20	
14.0		1.90	2.10	2.20	
16.0		1.10	1.40	1.40	
18.0			0.80	0.90	

A = Boom length B = Working radius

NOTES:

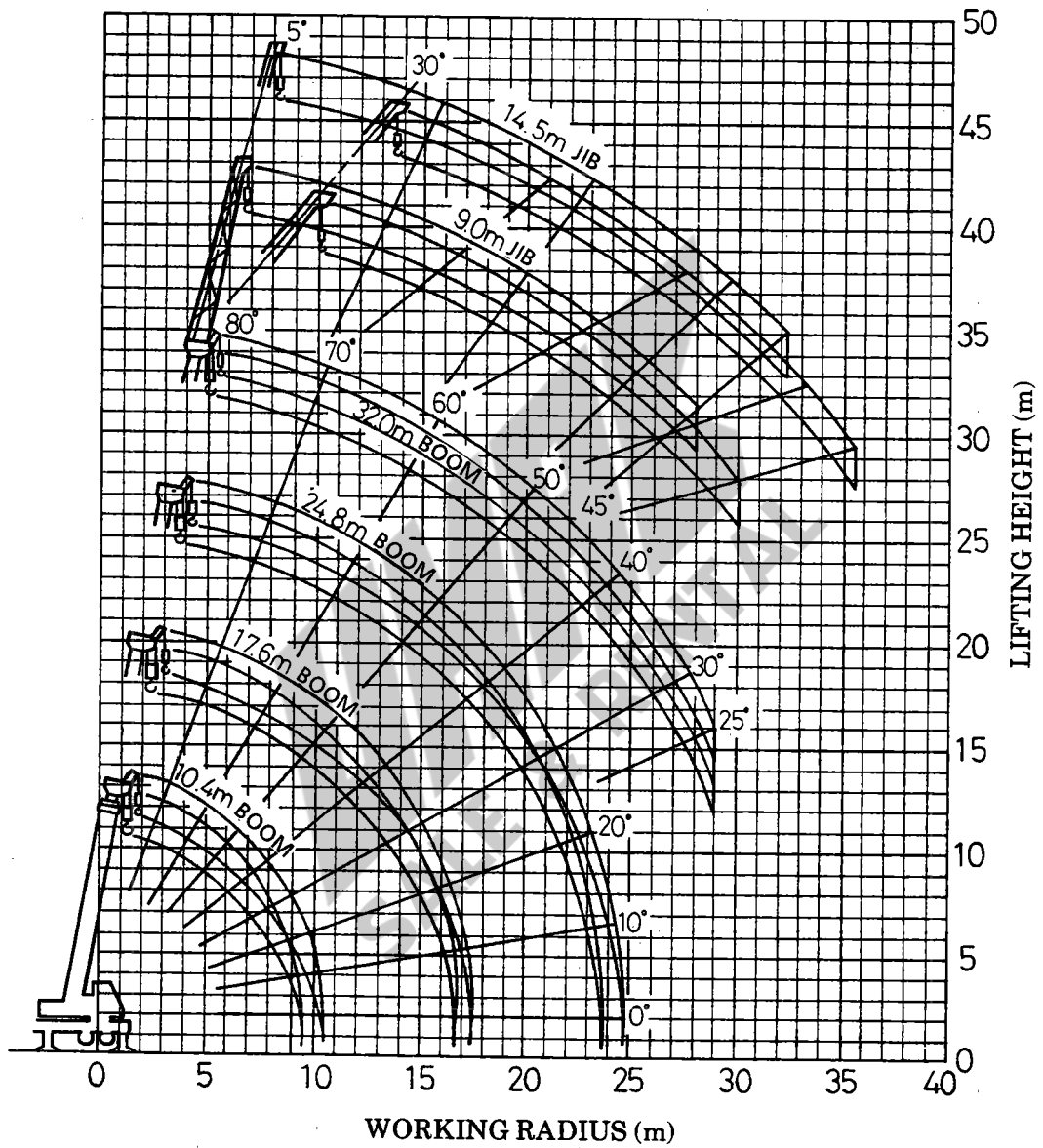
1. The total rated loads shown are for the case when the crane is set horizontally on firm ground. All values are based on the crane stability. The foundation, working conditions, etc. should be taken into consideration adequately when performing crane operations according to the total rated load chart for the case when the outriggers are not used (Over rear).
2. The weights of slings and hooks (350kg for a 35 ton capacity hook and 100kg for a 4 ton capacity hook) 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 number of part lines for each boom length should not exceed the values below. The load per line should not exceed 4 tons for both the main winch and the auxiliary winch.

A	10.4m	17.6m	24.8m	32.0m	Single top
H	9	6	4	4	1

A = Boom length H = No. of part-line

5. The total rated loads for free-fall operations is 1/5 of the total rated loads given above. The load per line should not exceed 0.8 ton for both the main winch and the auxiliary winch.
6. The total rated load for the single top is the same as that of the main boom and must not exceed 4 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.

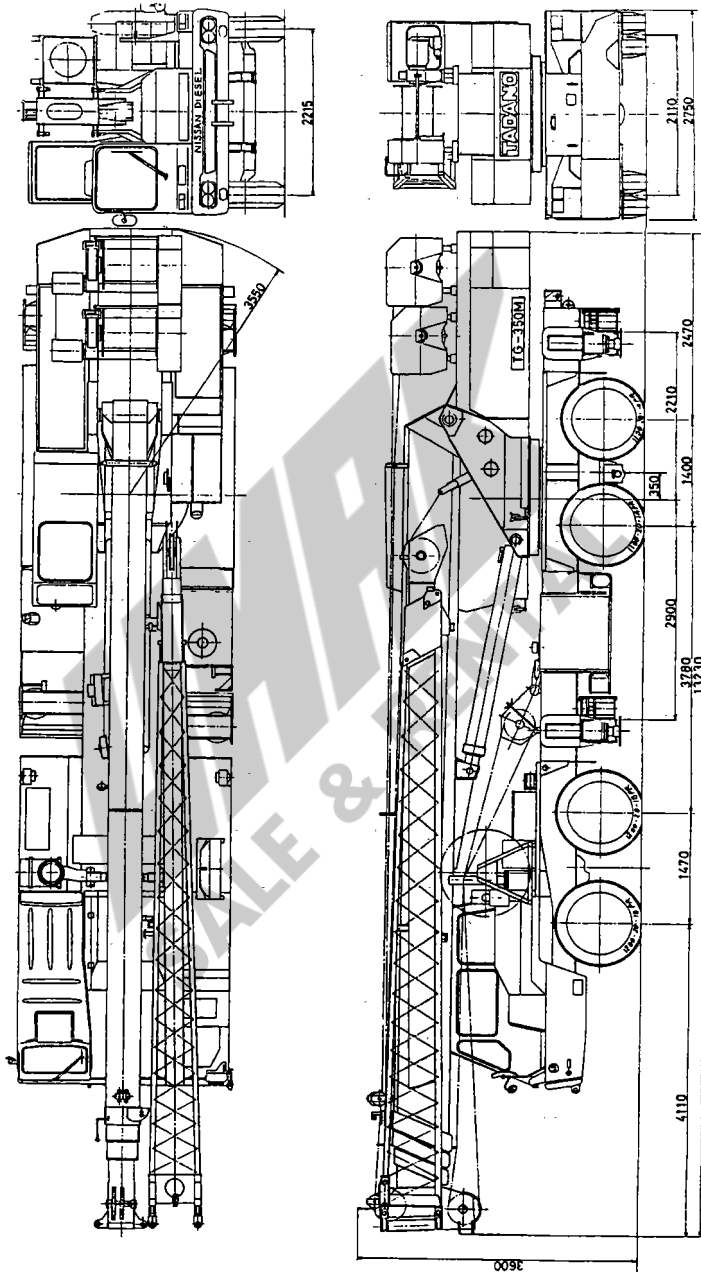
WORKING RADIUS - LIFTING HEIGHT



NOTES:

1. The deflection of the boom is not incorporated in the figure above.
2. The figure above is for the case when the outriggers are fully extended (Over rear or sides of the carrier).

DIMENSIONS (1/100)



◆ MEMO ◆

Lined area for writing a memo, consisting of 25 horizontal dashed lines.

