

# KATO

## FULLY HYDRAULIC TRUCK CRANE

# NK-20B

Lifting Capacity **20t**

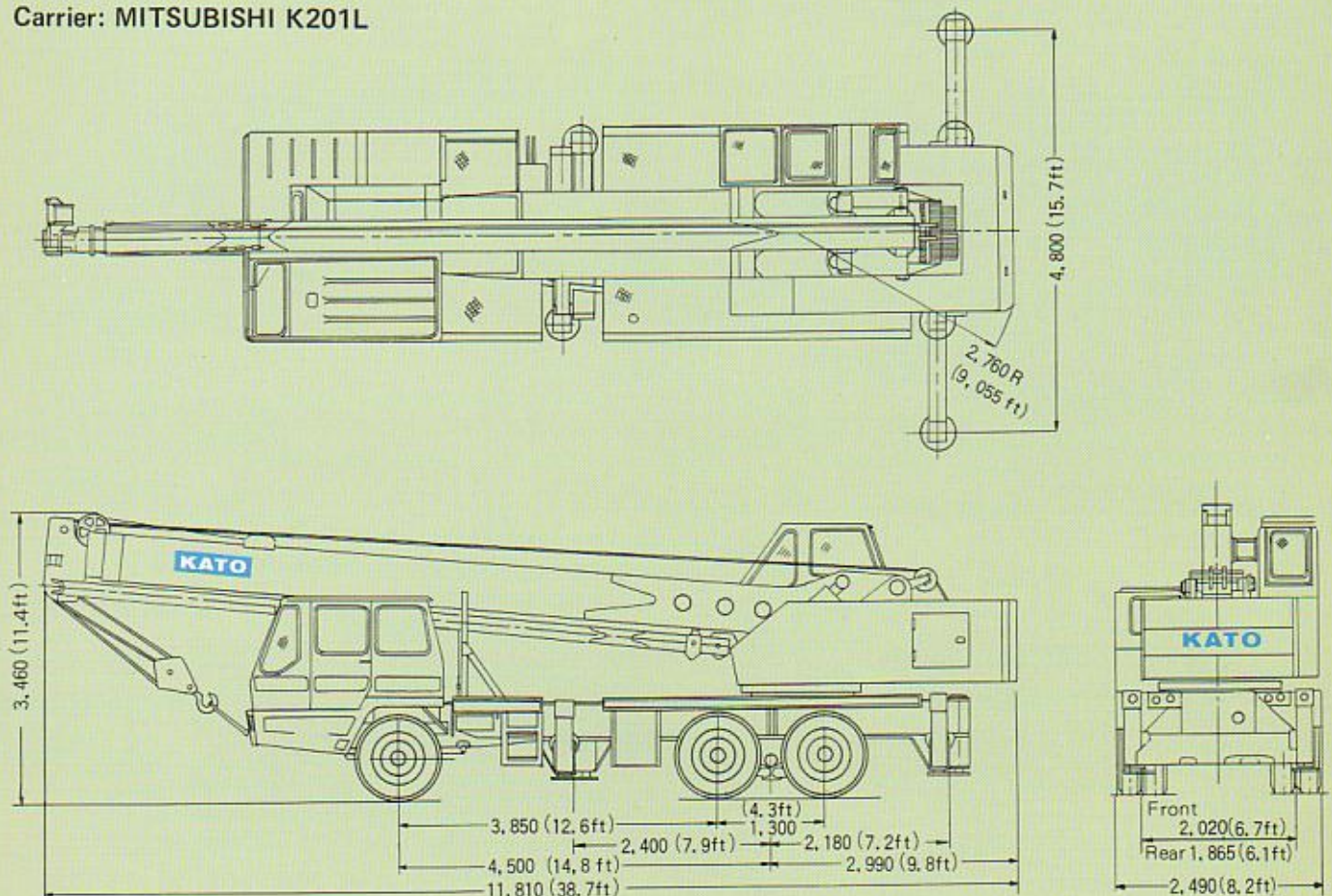


## GENERAL DATA

CARRIER MODEL	MITSUBISHI K201	NISSAN 4TW20C	HINO ZT300
TOTAL LENGTH mm (ft)	11,810 ( 38.7)	11,810 ( 38.7)	11,810 ( 38.7)
TOTAL WIDTH mm (ft)	2,490 ( 8.2)	2,490 ( 8.2)	2,490 ( 8.2)
TOTAL HEIGHT mm (ft)	3,460 ( 11.4)	3,460 ( 11.4)	3,460 ( 11.4)
ENGINE			
Model	MITSUBISHI 6DC2	NISSAN UD4	HINO EB 300
Rated output PS/rpm	200/2,500	175/2,400	190/2,350
GROSS WEIGHT Kg(lbs)	22,975 (50,650)	22,900 (50,485)	22,990 (50,683)
FRONT Kg(lbs)	5,525 (12,180)	5,205 (11,475)	4,990 (11,001)
REAR Kg(lbs)	17,450 (38,470)	17,695 (39,010)	18,000 (39,682)
WHEEL BASE mm (ft)	4,500 ( 14.8)	4,300 ( 14.1)	4,600 ( 15.1)
TREAD FRONT mm (ft)	2,020 ( 6.7)	1,980 ( 6.49)	1,910 ( 6.2)
TREAD REAR mm (ft)	1,865 ( 6.1)	1,870 ( 6.1)	1,850 ( 6.1)
MAX. SPEED km/h	70	67	65
TURNING RADIUS m (ft)	9.5 ( 31.2)	10.0 ( 32.8)	9.5 ( 31.2)
GRADEABILITY (tan $\theta$ )	26%	23%	32%
DRIVE SYSTEM	6x4	6x4	6x4
CLUTCH TYPE	Dry single disc	Dry single disc	Dry single disc
TRANSMISSION SYSTEM	Synchromesh	Constant mesh	Constant mesh
TIRE FRONT	10.00-20-16PRx2	11.00-20-14PRx2	10.00-20-14PRx2
TIRE REAR	10.00-20-16PRx8	10.00-20-14PRx8	10.00-20-14PRx8
STEERING TYPE	Ball nut with power assist	Ball nut with power assist	Ball nut with power assist
ELECTRICAL SYSTEM	24V starting, lighting, instrumental light, beam headlight, tail and stop-light, windshield wiper, horn and turn signal.		

- MACHINE is subject to the user's specifications and any chassis having proper capacity and dimension are applicable.
- We reserve the right to make specification or equipment changes without notice.

Carrier: MITSUBISHI K201L





## SUPERSTRUCTURE

### CRANE PERFORMANCE

Boom length (Full power 3 section)	10.2m ~ 26.2m (33.5ft ~ 86.0ft)
Fly jib length	7.4m ~ 12.0m (24.3ft ~ 39.4ft)
Boom derricking angle	-3° ~ 80°
Boom derricking time	72 sec. (min. to max.)
Boom telescoping speed	
Extension	0.18m/sec. (0.6ft)
Retraction	0.22m/sec. (0.7ft)
Hoist and lower rope speed	
Main winch	63m/min. (206.7ft)

Auxiliary winch	63m/min. (206.7ft)
Hoist and lower hook speed	
Main winch	9.0m/min. (29.5ft)
Auxiliary winch	63m/min. (206.7ft)
Slewing speed	3.1 rpm

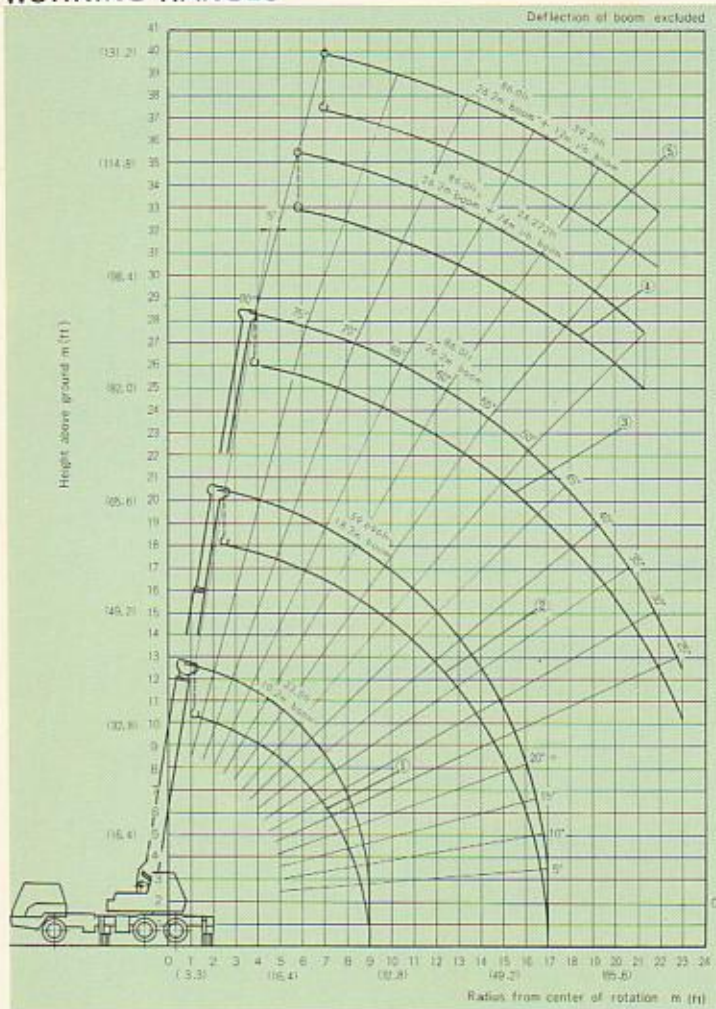
### WIRE ROPE FOR HOISTING

Main winch	Type	6 x Fi (29) I.W.R.C.
	Length	200m x 16mm dia.
Auxiliary winch	Type	6 x Fi (29) I.W.R.C.
	Length	90m x 16mm dia.

### HYDRAULIC SYSTEM

Hydraulic pump	Plunger-gear combination type
Hoist motor	Variable plunger type
Slewing motor	Radial piston type
Control valve	3 position 4 way double-acting type with integral check, and relief valves.
Cylinder	Double acting type

## WORKING RANGES



1. 10.2m (33.5 ft) boom lifting height
2. 18.2m (59.7 ft) boom lifting height
3. 26.2m (86.0 ft) boom lifting height
4. 26.2m (86.0 ft) boom + 7.4m (24.3 ft) jib lifting height
5. 26.2m (86.0 ft) boom + 12.0m (39.4 ft) jib lifting height

## RATED LIFTING CAPACITIES

Working radius (m)	With Outriggers (over side and over rear)		
	10.2m (33.5ft) boom	18.2m (59.7ft) boom	26.2m (86.0ft) boom
3.0	20.00 (44.1)	12.00 (26.5)	
4.0	14.40 (31.7)	12.00 (26.5)	
5.0	10.95 (24.1)	10.95 (24.1)	7.00 (15.4)
6.0	8.36 (18.4)	8.36 (18.4)	7.00 (15.4)
7.0	6.35 (14.0)	6.35 (14.0)	6.35 (14.0)
8.0	5.10 (11.2)	5.10 (11.2)	5.10 (11.2)
9.0	4.20 ( 9.3)	4.20 ( 9.3)	4.20 ( 9.3)
10.0		3.50 ( 7.7)	3.50 ( 7.7)
12.0		2.60 ( 5.7)	2.60 ( 5.7)
14.0		1.90 ( 4.2)	1.90 ( 4.2)
16.0		1.45 ( 3.2)	1.45 ( 3.2)
18.0			1.10 ( 2.4)
20.0			0.85 ( 1.9)
22.0			0.65 ( 1.4)
23.0			0.55 ( 1.2)

With Outriggers (over side and over rear)		
Boom angle	7.4m (24.3ft) fly jib	12m (39.4ft) fly jib
80°	2.41 (5.3)	1.44 (3.2)
75°	2.41 (5.3)	1.44 (3.2)
71°	2.41 (5.3)	1.44 (3.2)
70°	2.21 (4.9)	1.44 (3.2)
65°	1.54 (3.4)	1.06 (2.3)
60°	1.06 (2.3)	0.77 (1.7)
55°	0.77 (1.7)	0.58 (1.3)
50°	0.62 (1.4)	

in metric ton (lbs)

## NOTES

1. The rated lifting capacities are the maximum loads guaranteed on a firm level ground and include the weight of hook block and other lifting equipments.

Hook	for 2.0 ton	for 2.5 ton
Weight Kg (lbs)	250 (551)	100 (221)

The capacities in the blue area are based on the structural strength and other capacities on 75% of tipping loads.

2. The working radii are the actual values including the deflection of the booms.
3. When the boom length exceeds the rated one, operation must be carried out under the lifting capacities rated for the longer rated boom length.
4. The capacities are based on using outriggers fully extended. Any operations is prohibited unless the

outriggers are fully extended even if in no load condition.

5. During the main hook operation with the fly jib installed, 600 kg must be deducted from the capacities.
6. During the fly jib hook operation, working radius must not exceed 22 m (72.2 ft.).
7. The number of parts of rope for each boom length is as follows.

Boom length	10.2 m (33.5 ft)	10.2 m ~ 18.2m (33.5ft~59.7ft)	18.2 m ~ 26.2m (59.7ft~86.0ft)
parts line	7	6	6

8. The rated lifting capacities for fly jib hook are determined by each boom angle only and not determined by either boom length or working radius.

# **KATO** **NK-20B**

## **FULLY-HYDRAULIC FULL-SLEWING TRUCK CRANE**

**Maximum lifting capacity: 20 tons**  
**Maximum boom length : 38.2 m (with jib)**



### **OUTSTANDING BOOM CAPABILITY:**

Each part of three section boom hydraulically extends or retracts simultaneously and equally ("Full-Power"<sup>®</sup>), by single control lever action within the range from 10.2m to 26.2m length. This boom action also allows the light boom head and more lifting capacity than any other competitive cranes in same class.

### **EASY FLY JIB HANDLING:**

A fly jib folded underneath the boom permits extension or retraction of boom without removing jib hook. Pendant rod assures a easy and simple handling and reduces set-up time of the fly jib even at the restricted site.

### **FREOMATIC WINCHES:**

The main winch and the auxiliary winch have a common shaft allowing power lowering and gravity drop. An effective and fail safe system by means of the hydraulic motor which varies output in accordance with the load. Fingertip control and easy maintenance are available.

### **AUTOMATIC SAFETY CUT-OUT: (A.S.L.I.) Model: MS-3**

An indicator shows continuously both the rated allowable load and the actual lifting status along the boom length and working radius. For a safe operation, a buzzer warns of the danger as soon as the crane operation reaches any overload status, and then the hydraulic power is cut off automatically in the event of dangerous excess. This device is an optional attachment and can be installed by the customer's request.

### **WEIGHT INDICATOR:**

An indicator in the operator's cab shows actual lifting load suspended from the main hook or the fly jib hook. This device is an optional attachment and can be installed by the customer's request.



**KATO**

QUALITY & EXPERIENCE  
SINCE 1893

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