

KATO

NIK-160C

Fully Hydraulic
— CRAWLER CRANE —

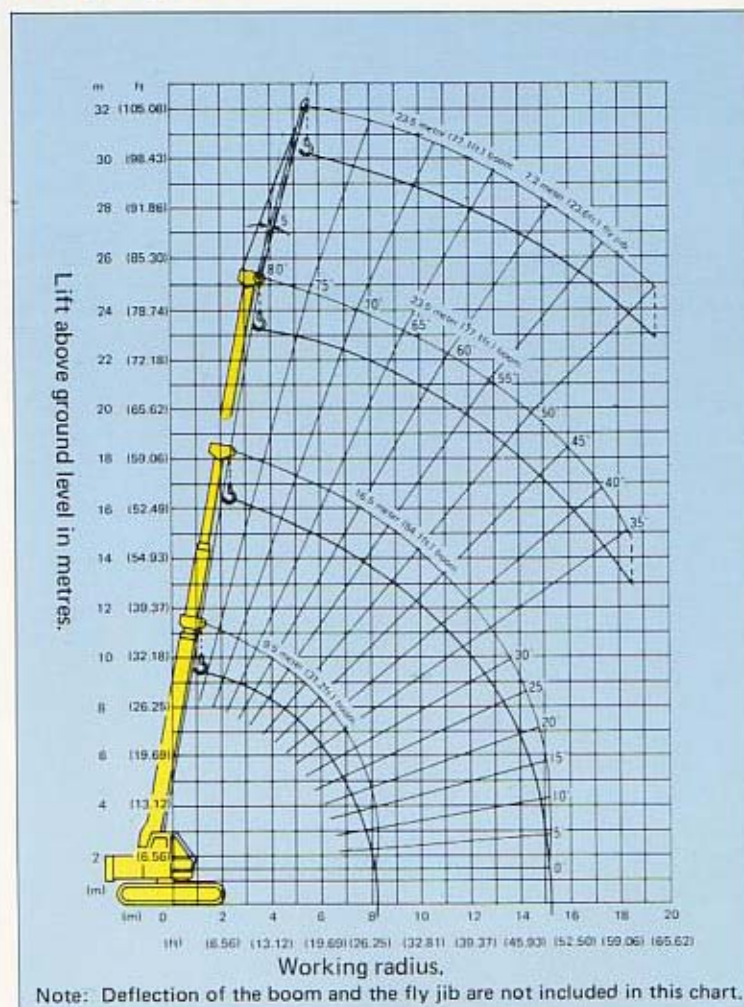


SPECIFICATION

Name and Model:	Kato NK-160C Fully Hydraulic Crawler Mounted Crane.
Maximum Lifting Capacity:	16 tons (35,274 lbs) @ 3 m on the 9.5 m (31.25ft.) boom in any direction.
Boom Length:	Minimum: 9.5 m (31.2ft.) Maximum: 23.5 m (77.1ft.) Fly Jib: 7.2 m (23.6ft.)
Hook Speeds:	Total lift height: 30.2 m (99.1ft.) (23.5 m (77.1ft.) boom, plus 7.2m (23.6ft.) jib.) Hoisting rope speed: 79.3 m (260.1ft.) per minute. Lowering rope speed: 66.4 m (217.9ft.) per minute. Winding speed of Auxiliary rope: 79.3m (260.1ft.) per minute. Winding up speed of main hook: 13.2m (43.3ft.) per minute with 6 fall rope. Winding down speed of main hook: 11.1m (36.4ft.) per minute with 6 fall rope. Winding up speed of auxiliary hook: 79.3m (260.1ft.) per minute with single fall rope. Boom raising time: 34.7 secs. from -5 deg. to +80 degs. Boom lowering time: 47 secs. from +80 deg. to -5 deg. Boom extension speed: 0.27 m (0.89ft.) per sec. Boom retraction speed: 0.22 m (0.72ft.) per sec.
Slewing Speed:	5.5 r.p.m. (max.)
Travelling Speed:	1.53 Km (0.96 mls)/h.
Climbing ability:	Gradients to 21°50'
Ground bearing pressure:	0.54 kgs/cm ² (7.68lbs/in ²) fully equipped.
Total weight:	Approx. 23,500 kg. (51,808 lbs) with 7.2 m (23.6ft.) fly jib.
Engine:	Mitsubishi 6DS diesel engine, or equivalent.

The above specifications are subject to change without prior notice.

Working Range of Boom



Rated Load Table

Working radius m (ft)	In any direction					
	9.5m (31.2ft) boom		16.5m (54.1ft) boom		23.5m (77.1ft) boom	
	ton	(Lb)	ton	(Lb)	ton	(Lb)
3.0 (9.84)	16.00	(35,274)				
3.5 (11.48)	11.50	(25,353)				
3.8 (12.47)	10.00	(22,046)	10.00	(22,046)		
4.0 (13.12)	9.00	(19,841)	9.00	(19,841)		
4.5 (14.76)	7.50	(16,535)	7.50	(16,535)		
5.0 (16.41)	6.30	(13,889)	6.30	(13,889)		
5.5 (18.05)	5.50	(12,125)	5.50	(12,125)	5.50	(12,125)
6.0 (19.69)	4.80	(10,582)	4.80	(10,582)	4.80	(10,582)
6.5 (21.33)	4.20	(9,259)	4.20	(9,259)	4.20	(9,259)
7.0 (22.97)	3.70	(8,157)	3.70	(8,157)	3.70	(8,157)
8.0 (26.25)	3.00	(6,614)	3.00	(6,614)	3.00	(6,614)
9.0 (29.53)			2.50	(5,512)	2.50	(5,512)
10.0 (32.81)			2.05	(4,519)	2.05	(4,519)
12.0 (39.37)			1.40	(3,086)	1.40	(3,086)
14.0 (45.93)			1.00	(2,265)	1.00	(2,265)
16.0 (52.50)					0.75	(1,653)
18.5 (60.70)					0.50	(1,102)

Angle (deg.)	Working radius		In any direction Jib operation	
	m	(ft)	ton	(Lb)
73	10.0	(32.81)	2.00	(4,409)
70	11.4	(37.40)	1.70	(3,748)
65	13.8	(45.28)	1.20	(2,646)
60	16.0	(52.50)	0.80	(1,764)
55	18.1	(59.39)	0.55	(1,213)
52	19.5	(63.98)	0.35	(7,720)

Notes

- The figures in the rated load table show the maximum loads allowable within the limit of 75% overturning load, on a flat solid ground surface, including the empty weight of the hook unit (main hook = 250 kg (551.2lbs), auxiliary hook = 100 kg (220.5 lbs)), based on actual measurements in which the working margins of the boom and jib are included.
- If the working length of your boom should exceed the boom length specified in the table, the rated load for the boom length one size longer than that specified in the table should be applied.
- Always use six falls of rope for the hook at each boom length.
- Do not operate the main boom in excess of the working radius of 18.5m (60.7ft.)
- The jib operation is specified above in terms of boom angle and working radius, but the working radii in the table are those applicable when the boom length is longest, always refer to the boom angle when operating the boom at a shorter length, but do not operate the boom at an angle below 52 degrees.
- When the main boom is used with the fly jib attached to the top of the boom, deduct 400 kg (581.8 lbs) from the rated load in the table.

A Symbol of KATO's technology!

NK-160C CRAWLER CRANE

Fullpower boom

We introduce here a fully Hydraulic Crawler Mounted Crane with a Telescopic Boom developed by Kato from original ideas and presenting the ultimate in modern techniques. KATO is one of the leading manufacturers of Truck Cranes and Power Shovels with 30 years experience and accumulated experience in this field.



NK-160C Fully Hydraulic Crawler Mounted Crane

Maximum Hoisting capacity 16 ton. (35,274 lbs.)
Maximum Boom length 30.7 metres. (100.7ft.)
(Boom 23.5m. (77.1ft.) plus Fly Jib 7.2m. (23.6ft.))
Total Lift 30.2 metres. (99.1ft.)
(Boom 23.5m. (77.1ft.) plus Fly Jib 7.2m. (23.6ft.))
Gross Weight
(Fully equipped) Approx. 23,500 kg. (51,808 lbs)
(Including 7.2m. (23.6ft. jib))

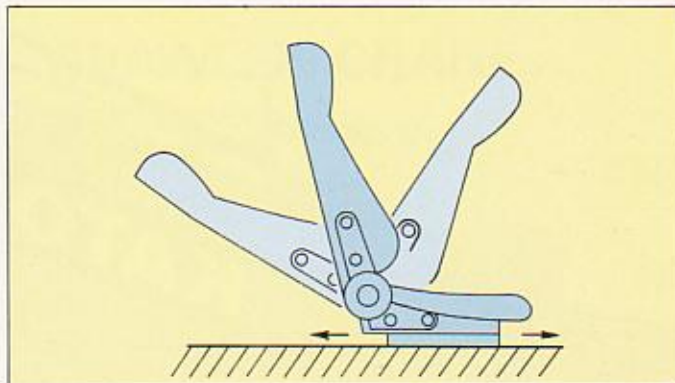
Easy to Handle, Fully Hydraulic Telescopic Boom (Fullpower Type)

The three extension boom is fully hydraulically controlled and extendable from 9.5m. (31.2ft.) to any desired length up to 23.5m. (77.1ft.) by operation of a single lever. This Crawler Crane therefore enables quick and easy handling of materials, erection of steel structures, building of prefabricated units and other construction activities even on congested building sites.

Transportable on Truck Trailer

The NK-160C can be transported on a truck trailer as a completely equipped unit. There is no need to remove the boom from the main frame for separate transportation. Immediately the crane is off-loaded from the transporter, it is ready for work with no loss of time or money.

— WELL-COMPUTED RATIONAL MECHANISMS —

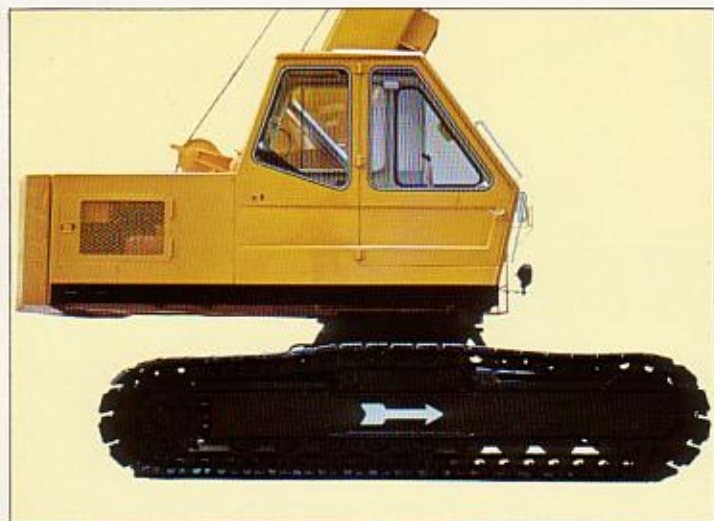


The Unit is Designed with Operator Comfort and Efficiency in Mind.

Control levers and gauges are situated to make handling easy and gauges easy to see.

Wide windows are provided in the operators cab in order to make the cab light and airy and command a wide view, thus minimising operator fatigues.

The seat is the reclining type, which will adjust for any operator, and allow him to work comfortably for long periods. The seat can be tilted into a relaxing position when the operator is not working.



Simplified Hydraulic Adjustment on Crawler Tracks.

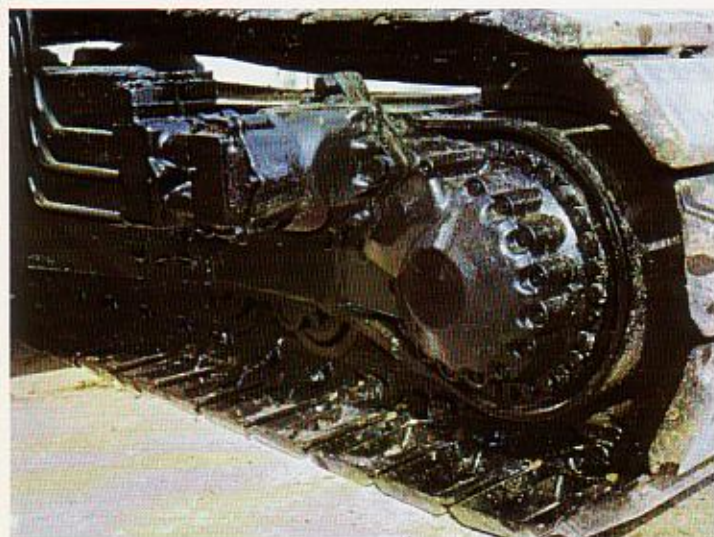
The tension of the tracks can be easily and quickly re-adjusted by hydraulic method, cutting down on maintenance time.

Lubrication-free Construction

A floating-seal lubrication system is employed. The upper and lower track rollers and idlers can operate for a long period without lubrication, and consequently can be maintained and inspected with ease at low cost.

The shoe construction is strong, durable and stable.

The crawler under-carriage has strong independent track gear drive which permits the crane to move around in a stable manner even where uneven site conditions exist.





Ideally Suited for Handling Long Loads

Having a wide angle of boom elevation ranging from -5° to $+80^{\circ}$ and the boom supporting mechanism at the rear, the crane can approach close to working objects which many other types of crane cannot, particularly on congested sites during construction of a building.

The wide scope of operation of the NK-160C is further widened by the ability of freely extend the boom.

Damage to the cylinders that is often seen in conventional pushing types is eliminated in this model. The boom can be lowered to near ground level and consequently installation and removal of the jib, and maintenance tasks in the boom area are simplified.



Excellent Safety Design

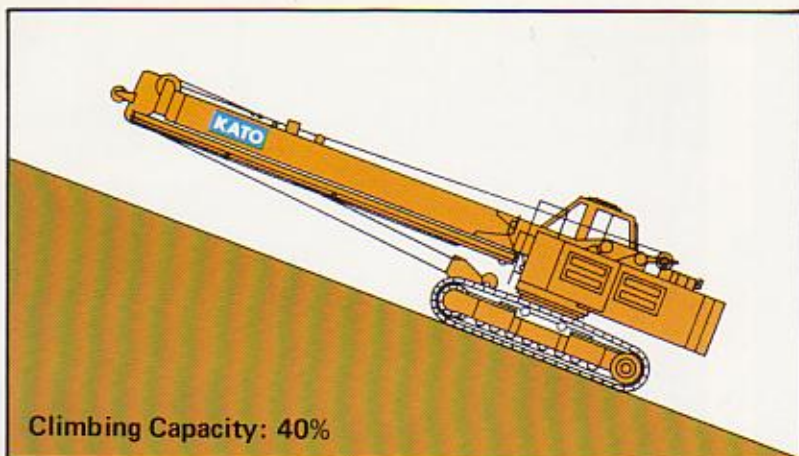
The Crawler crane is fitted with a load gauge to measure hoisted load, to prevent overloading, and an indicator shows the permissible load range.

Balancing valves and brake valves are provided for each cylinder. There are devices for preventing the boom or load from falling, or the crawler from running down hill, even if hydraulic piping or hydraulic hoses should be damaged.

Other safety devices include a swivel lock and an overhoisting warning device.

Maintenance and Inspection

The rationally designed construction of the crane makes maintenance and inspection tasks simple.

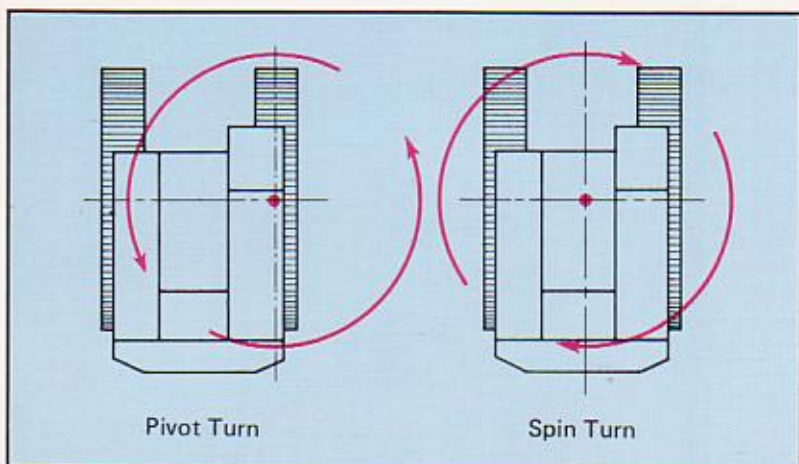


Climbing Ability

The powerful track motors enable the crane to climb steep slopes with ease.

Diesel Engine

The powerful high horse power diesel engine used in the crane gives excellent h.p. facilities and enables hard and continuous running.



Ability to Turn Quickly

Each track is gear driven by independent hydraulic motors, making spin turns or pivoting easy at the operators will. This ability is especially useful on congested sites.



Wide Variety of Attachments to Give Maximum Working Ability

The variety of attachments include an earth auger, pile driver and clamshell. These are available to widen the range of operation.

A third winch can be fitted, subject to special specification.



Convenient 'Kangaroo' type Jib

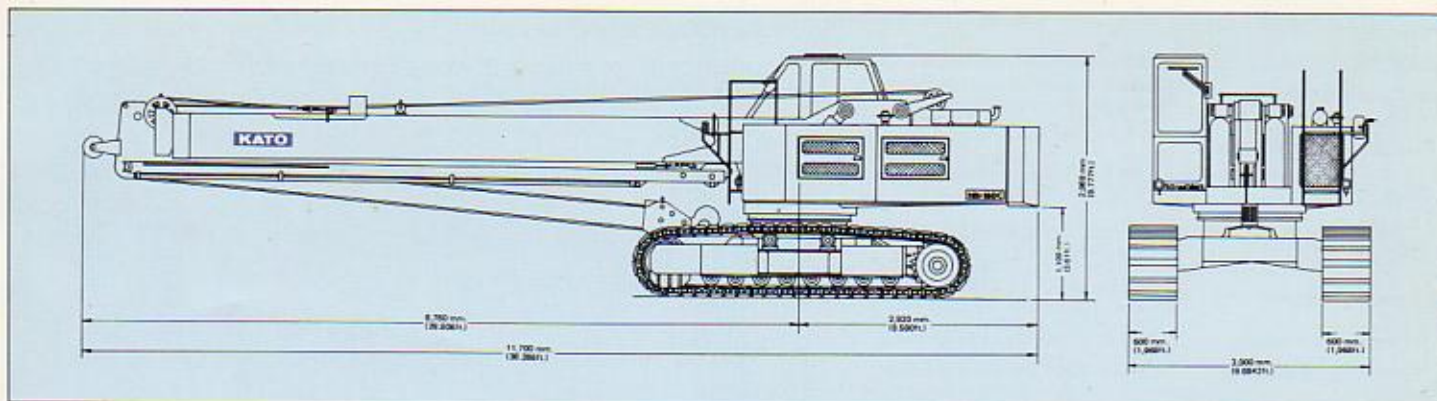
The fly jib can be easily installed or removed from under the main boom. The main boom can be extended with the fly hook attached. The pendant of the jib boom being of the rod type, can be operated with ease.

Freomatic Winch Mechanism Designed for Heavy Operations.

The winch mechanism employs a powerful and high pressure type plunger motor which is designed to undertake long and continuous crane operation with first-class performance.

The winch can be lowered either by power drive, or freely by its own weight, depending on the operator's choice, and the rope speed is automatically changed in accordance with the applied load. This free fall facility is most important.





KATO

QUALITY & EXPERIENCE SINCE 1895

KATO WORKS CO., LTD.

HEAD OFFICE:

No. 9-37, 1-chome, Higash-ohi, Shinagawa-ku,
Tokyo, Japan
Tokyo 471-8111

Tel:

FOREIGN DEPARTMENT:

The 17th Mori Bldg., 1-26-5, Toranomon,
Minato-ku, Tokyo, Japan
Tokyo 591-5111
CRANEKATO TOKYO
0 222-4519 (CRKATO J)

Tel:

Cable Address:

Telex: