Here is the newest and finest efficiency to the construction of structures, highways, railroads, bridges and harbor cargo work—the KATO NK-800 80 tons truck crane that is movable to various locations.

KATO, a famous pioneer of truck cranes, now presents a historical achievement in the practicality of fully hydraulic truck cranes. It is the KATO NK-800 80 tons truck crane that brings you new dimensional uses in truck crane utility. This powerful truck crane is the result of years of truck crane studies in design and structures of truck cranes, experiences and an abundance of achievements that are combined with the newest of technical accomplishments. It has the newest of designs and a mechanism that other machines never had and that out-rival any competitor's to this date. It fully incorporates the latest merits of hydraulics and assures the operator's safety.

The NK-800 is superior in function and is smoothly combined with complete safety features so that it can be used in a more diversified field of work. Utilize this newest of efficient truck-crane and realize a larger profit from it.
OPERATOR'S CONVENIENCES AND COMFORTABLE CAB

- Operator may enjoy his conveniences in the cab.
- One easy observable position of all levers and instruments.
- A heater is standard cab equipment and a cooler is optional.
- A deluxe soft fully reclinable seat that is re-adjustable to various positions to cause the operator no fatigue during many hours of usage.
- Heat absorbant glass is glazed and clear to refract heat and to filter out the ultra-violet light which causes general fatigue. The glazed heat absorbant glass has a large water wiper blade adequately mounted to use in high lift operations and during rainy inclement weather.
- The maximized glass portions are large so as to give the operator a necessary view of all surroundable areas.

RAPID TRANSPORTATION IN AND OUT OF NARROW SITES

- The independently mounted engine enables a crane operation while traveling. Also, while traveling to and from a limited site, the jib can be mounted thereon.
SUPERIOR RELIABLE ELECTRICAL MOMENT LIMITER

- In conventional machines, crane operation depends upon experience of the operator but now the operations are controllable rational safety devices.
- Unique high accuracy of fully automatic overload protective device that prevents tipping and fracture of the crane.
- Most reliable moment limiter—of which KATO is proud—that promotes an operator's self-confidence and a feeling of a full command of his machine enabling him to operate the crane while confirming the safety work range as indicated on the moment comparator meter.

Also, it is equipped with other highly accurate safety devices such as a boom length meter, boom angle meter, load meter and etc.

The total moment, produced by a lifted load and a dead weight of the boom, is detected by the accurate detector. A buzzer alarm is sounded just as the total moment arrives at the 5% below the limit moment where a red lamp lights as it arrives at the limit moment thereby stopping the derrick, extension of the boom and the hoisting of the winch, automatically.

FREE SPEED CHANGE FROM SUPER-LOW SPEED TO HIGH SPEED.
FINE SPEED CONTROL.

Powerful Frematic Winch

- Smooth and continuous free high lifting operations as well as fine inching operations, using the levers and functioning of the flow controlable system, are achieved through the use of the super-low to high speed functioning of the powerful non-step controlable main and sub-winch.
- An automatic brake functions, automatically, when a lever is returned to the neutral position. The free fall pedal significantly improves the operational efficiency, and the triple safety structure contains a counter balancing valve, drum, drum lock and etc. that prevents danger and gives a precise safety operation.
- The grooved drum has a non-alignment rope winder prevention device that prevents non-aligned winding of the rope and, significantly, lengthens the life span of the rope.

SPLENDID MECHANISM OF WEIGHT DISTRIBUTION

- The ideal weight distribution and low center of gravity provide a superior operation and an excellent stability as well as excellent travelability and maneuverability.

4 INDEPENDENT HYDRAULIC SYSTEMS

- There are 4 independent hydraulic systems that enable easy complex operations.
- There are 3 powerful hydraulic pumps and a special hydraulic system enable simultaneous operations of the winch, slewing, derrick and lowering of the boom, and extending and retracting of the boom.
IDEALLY UNIQUE ‘FULL POWER’ SYSTEM BOOM

• The NK-800’s rational boom controllable system (a sequential boom controllable system of extension and retraction and in which one lever operation controls the extension and the retraction of the boom within the range of 12 m to 44 m) prevents erroneous operation and provides safety and precise operation, irrespectively of the load variation.

• ACS moment limiter, of which KATC is proud, provides an appropriate total rating load and safety crane control at any boom length.

• The jib is easily attachable because the boom can be tilted to -2°.

• The balanced design of the boom is highly durable because of the balanced super high tensile strength of the sheet-steel.

• The jib boom is mounted at the underside of the main boom where it can be set into workable position from removal and re-positioning of one pin within several minutes.

• Extension and retraction of the jib boom can be easily done manually and by winch, respectively.

AUXILIARY SHEAVE

• The auxiliary sheave that is mounted at the edge of the boom enables an easy single rope operation while housing the jib boom as it is, thus, enabling effective crane operation.
STABLE OPERATION
Outriggers have high holding strength.
- The rugged box structure H-type hydraulic outriggers with long out stretched length and high holdable strength assures safety and stable operations.
- The long vertical cylinder stroke of the outriggers, in conjunction with the level vial, assures a horizontal settling of the crane at not only leveled land, but, also, non-leveled land such as slipped land or uneven land to cause a stable operation.

A TOUGH 200 PS DIESEL ENGINE
A tough 200 PS engine is exclusively used for the crane.
- An independently mounted tough and durable 200 PS diesel engine is, exclusively, used for the crane. It is separate from the carrier engine and preserves power during severe continuous operation of heavy loads and while high lifting as well as lifting of light loads that is done without any difficulty.

CONTINUOUSLY SMOOTH CRANE SLEWING
During a continuous crane slewing, the slewing mechanism remains stable all of the time.
- The crane’s slewing is quite smooth because the slewing system contains an anti-shock brake valve in its mechanism.
- Smoothly fine slewing is obtained from the functioning of the cushion valve which weakens the shock that is generated during the starting and the stopping time.
- Abnormal shock that is generated by the counter lever operation is, also, prevented to assure a safety operation.
### RATED LIFTING CAPACITIES

<table>
<thead>
<tr>
<th>Working radius (m)</th>
<th>12m boom</th>
<th>18m boom</th>
<th>24m boom</th>
<th>30m boom</th>
<th>36m boom</th>
<th>40m boom</th>
<th>44m boom</th>
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<td>10.0</td>
<td>20.0</td>
<td>30.0</td>
<td>40.0</td>
</tr>
</tbody>
</table>

(Note: All values are in metric tons)

### NOTES

1. The rated lifting capacities are the maximum loads guaranteed on firm level ground and include the weight of hook block and other lifting equipment. The capacities in the green area are based on structural strength.

2. The working radii as given in the table are the actual values including the deflection of the booms. Therefore, operate the crane based on the working radius. But working radius for operation with the jib should be the one for operation with the fully extended boom (44m). Only boom angle has an effect on operation with the jib when the boom is not fully extended.

3. The lifting capacities for operation with outriggers are based on use of outriggers fully extended, the machine set horizontal and the load lifted at either of the rear or sides as shown below.

4. When the boom length exceeds the specified value, the rated lifting capacities for the boom lengths adjacent to the present boom length should be referred to, and the crane should be operated with the smaller lifting capacities.

5. When using the boom with the jib installed, 2700kg should be subtracted from rated lifting capacities besides the weight of the hoisting equipment, etc.

6. Taper angles at each boom are as given in the below table. Don't reduce boom angles smaller than given therein.

7. The minimum number of parts of line is determined so that weight per part will not exceed 7000kg. The number of parts of line in terms of boom length is as shown below.

8. The crane will tipover or damaged if operated with a load other than specified in the rated lifting capacity table or not conforming to correct handling.

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**Diagram:**
- Lifting Range
- Right side lifting
- Left side lifting
- Fully extended

**Table:**
- Boom length: 12m, 12m to 18m, 18m to 30m, 30m to 44m
- Parts line: 12, 6, 6, 4
# Superstructure Specifications

## Crane Performance
- Rated lifting capacity: 80,000kg x 3.5m with 12m boom
- 45,000kg x 4.5m with 18m boom
- 35,000kg x 4.5m with 24m boom
- 27,000kg x 5.5m with 30m boom
- 22,000kg x 6.5m with 36m boom
- 18,000kg x 7m with 40m boom
- 12,000kg x 6.5m with 44m boom
- 6,000kg x 11m with 44m boom + 6.5m fly jib
- 4,000kg x 13m with 44m boom + 15m fly jib

**Note:** Over side and over rear with outriggers. Test load = 1.25 x lifting load + 0.1 x dead weight of boom reduced to the boom point.

## Wire Rope for Hoisting
- Main hoist: Type 6 x Fi(29)1 I.W.C.
  - Diameter: 22mm
  - Length: 240m
- Auxiliary hoist: Type 6 x Fi(29)1 I.W.C.
  - Diameter: 22mm
  - Length: 130m

## Hydraulic System
- 3 section gear type
- Axial plunger type
- Double acting type
- 3 position 4 way double acting with integral check and relief valves

## Fluid Reservoir Capacity
- 900 liters

## Crane Cab
- Outrigger lock device, Boom dericking safety device, Boom extending & retracting safety device, Over winding alarm device, Boom angle indicator, Hydraulic circuit safety valve (relief valve), Hoisting drum lock device, Hoisting drum turn indicator, Automatic crane stopper (A.C.S.)

## Safety Device

<table>
<thead>
<tr>
<th>Model</th>
<th>Kato 1250D</th>
<th>Mitsubishi K-1200L</th>
<th>Faun-Werke Kf70.52/65</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Length</td>
<td>15,400mm</td>
<td>15,400mm</td>
<td>15,400mm</td>
</tr>
<tr>
<td>Total Width</td>
<td>3,000mm</td>
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<td>3,000mm</td>
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<tr>
<td>Total Height</td>
<td>3,800mm</td>
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<td>3,800mm</td>
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<tr>
<td>Wheel Base</td>
<td>5,500mm</td>
<td>5,800mm</td>
<td>5,800mm</td>
</tr>
<tr>
<td>Tread Front</td>
<td>2,540mm</td>
<td>2,730mm</td>
<td>2,540mm</td>
</tr>
<tr>
<td>Tread Rear</td>
<td>2,710mm</td>
<td>2,680mm</td>
<td>2,710mm</td>
</tr>
<tr>
<td>Gross Weight</td>
<td>Approx. 91,000kg</td>
<td>Approx. 91,000kg</td>
<td>Approx. 60,000kg</td>
</tr>
</tbody>
</table>

## Engine
- **Nakajima Model Type**: 4 cylinder, water cooled, 4 type diesel engine
- **Displacement**: 135mm x 180mm
- **Max. Output**: 330PS, 2,500 rpm (US) 103kgf, 1,200 rpm (JIS)
- **Fuel Tank**: 300L
- **Gear**: Reverse "ELIGI" Type

## Clutch
- 2 dry plates, hydraulic control

## Transmission
- 9 forward & 2 reverse
- **Gear**: 1st - High Reverse - 4.058
- **1st High**: 4.058
- **Transfer**: High-High 0.314
- **Low-Low 1.031
- **Low-Low 3.035
- **Low-Low 0.000

## Steering
- Left hand steering with power booster

## Suspension
- **Front**: Independent strut suspension with torque rods
- **Rear**: Independent strut suspension with torque rods

## Brakes
- Service brake: Air brake, 12 wheels internal expanding
- Parking brake: Spring loaded brake

## Driver's Cab
- All steel welded construction, 2 passengers, low level type

## Tire Size
- Front: 14.00 - 24 X 8
- Rear: 14.00 - 24 X 8

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*Machine is subject to the user's specifications and any chassis having proper capacity and dimension are applicable.

In order that product improvement may be introduced at any time, specifications are subject to change without prior notice.