*More Power Than Ever! 20t*

# NK-200E-v


KATO

# *Tough New Boom Reduces Vertical Deflection and Lateral Bending During Lifting Operations*

KATO'S revolutionary Compuload microcomputer control system monitors the crane's operational status at all times, keeping the operator constantly informed of what is going on through instant numerical readouts in an easy to read digital display.

# Advanced Microcomputer Control System

**Voice alarm is available as an option**

## AUTOMATIC SEVEN-POINT DETECTION

The advanced ACS Moment Limiter is a fully automatic overload prevention device incorporating calculation functions based on the latest electronic know-how. It provides precise output on up to seven safety factors: safety level (total moment), boom angle, working radius, boom length, critical load, actual load, and maximum hook lift. These factors are displayed on a graphic display panel. This arrangement permits easy readout without eye fatigue and facilitates a constant and accurate appraisal of changes in the safety factors, thereby enhancing the safety of crane operation.

## CONSTANT FIVE-POINT DISPLAY OF OPERATING CONDITION

- In-panel indicators have been replaced by digital displays that show safety level, boom angle, boom length, working radius and critical load at all times, without any troublesome button operations. For further the display of safety level is color-zoned to enable the operator to take in the condition of the load at a glance.
- **Protection against breakdowns and malfunctions** . . . For double protection in the unlikely event of a malfunction in the ACS Moment Limiter or any other problems, a trouble indicator has been provided to generate an emergency signal in the appropriate display to warn the operator.



Photo; Hydraulic front jack and Oil cooler (Option)

# 3-Stage Jib Offset Extra long reach ideal for close-in, high-lift work

***Extra long boom boosts high and remote lift capabilities***

- ***Boom length*** ***10.5 ~ 26.2m***
- ***Jib length*** ***7.5m (7.5m ~ 12m : option)***
- ***Jib offset*** ***(3-stage: 5°, 17°, 30°)***

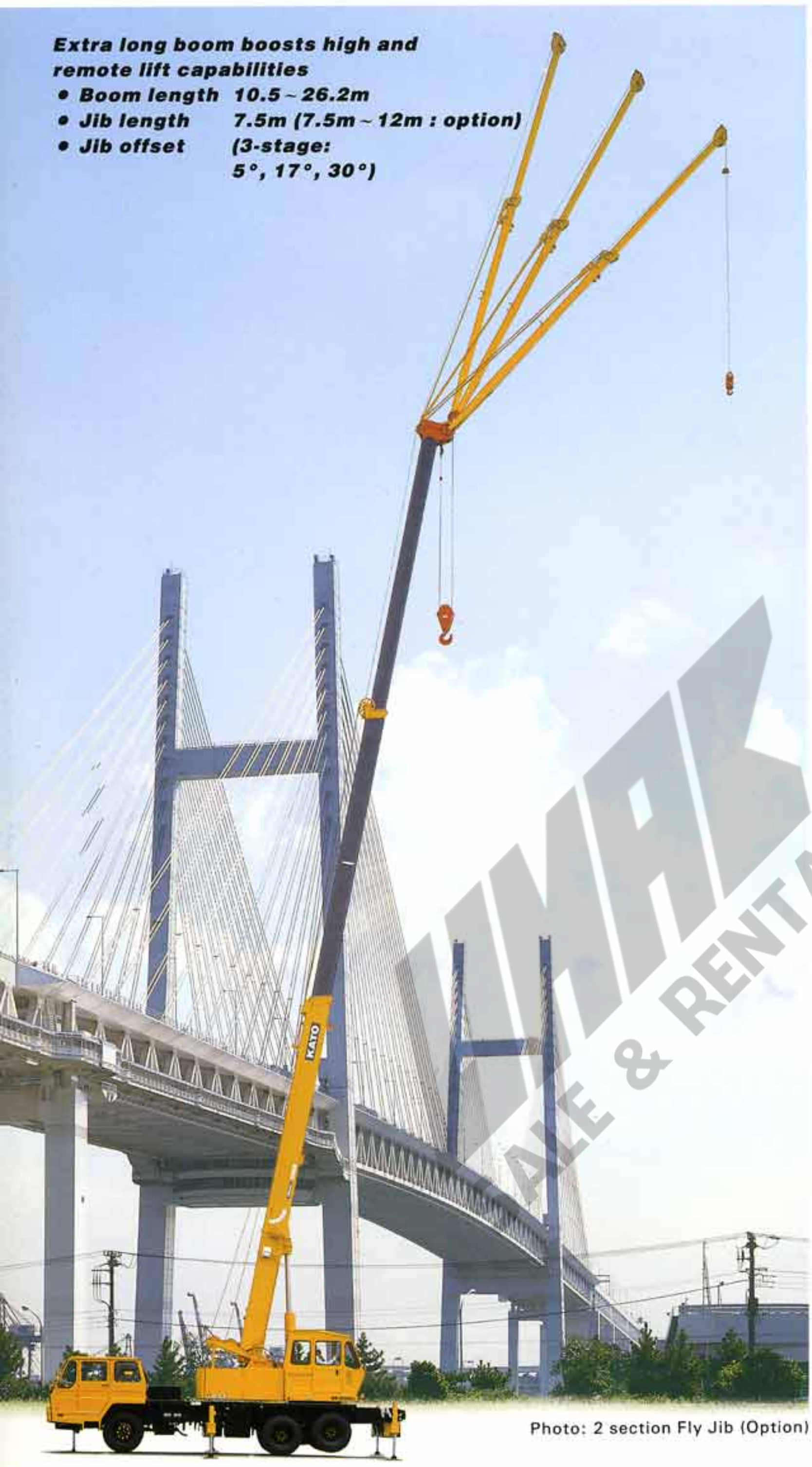



Photo: 2 section Fly Jib (Option)

## FULL POWER BOOM

- The tough new Fullpower boom utilizes a sequential, synchronized extension/retraction control system that permits single-lever control and speeds up operations at all boom lengths from low lifts at 10.5m (fully retracted) to high lifts at 26.2m (fully extended).
- For greater ease of use, operability and safety, the new boom is of a robust construction that reduces vertical deflection and lateral bending during operations.

## FANTASTIC OPERATING RANGE! IDEAL FOR CLOSE-IN OPERATIONS THANKS TO 3-STAGE JIB OFFSET (5°, 17°, 30°)

- In addition to the conventional offset angles of 5° and 30°, the jib on the NK-200E-v can also operate at an extra offset angle of 17°. Selection of the 3 offset angles is simple and the feature is a real boon in close-in work during the construction of high-rise buildings or when performing high-lift operations in restricted spaces.

## GREATER EFFICIENCY IN SINGLE-ROPE LIFTING OPERATIONS—CONVENIENT ROOSTER SHEAVE

- This feature greatly enhances operating speed when handling lightweight loads. The rooster sheave is easy to mount at the head of the boom, and the hoisting and lowering of single hook load can be carried out with greater ease and efficiency.

# Advanced Electronics Enhance Reliability

## WIDE OPERATING RANGE! FORWARD-ACTING DERRICKING CYLINDER DELIVERS DERRICKING RANGE FROM −3° TO 80°

• The powerful forward-acting derrick cylinder and the rearward installation of the derrick cylinder not only give the NK-200E-v a derricking range from −3° to 80° but result in excellent visibility during operations.

## EASY TO MOUNT ON EVEN THE MOST RESTRICTED WORKSITE

• The crane is compactly designed so that the jib folds conveniently under the boom during travelling, and opens out forward and upward when required for use. Mounting requires less space and bother than the horizontal fold-out type, making it ideal for rapid setups in confined sites.


# Extra-Large Cabin for Greater Comfort and Ease of Operation

### EXTRA-LARGE CABIN FOR GREATER COMFORT AND EASE OF OPERATION

• The spacious cabin is finished in highly relaxing color tones and comes with a sliding door that facilitates ingress and egress and can be left open without getting in the operator's way. A push-up type window is incorporated in the roof for better ventilation. Careful consideration has been given to human engineering for maximum operator comfort; the lengths of the levers can be adjusted and the high-backed seat can be moved forward or backward, raised or lowered to suit any physique. The result is a comfortable, roomy cabin that helps banish fatigue even during extended periods of operation.

• Easy to use pedals have been attached to the winch levers for greater convenience in compound operations.

• **Priority given to safety in operator's cab** . . . For maximum operator comfort and safety all instrumentation utilizes the very latest electronic technology and, together with the various controls and levers, has been located in the optimum position for visivility and ease of operation.

## *Outriggers Capable of Intermediate Extension for Operations on Narrow Sites*


### ACS CONTROLS PERFORMANCE ACCORDING TO OUTRIGGER STATUS

• **Sturdy, fully hydraulic outriggers . . .** The outriggers are designed for 2-stage extension, 5.6m at maximum stroke and 3.8m at intermediate stroke for greater stability during operations on restricted sites. Messy float mounting and dismounting operations have been eliminated by incorporating them into a single unit with the vertical cylinders, thus helping to reduce operation times. Ample road clearance permits the simple setting of wooden blocks.

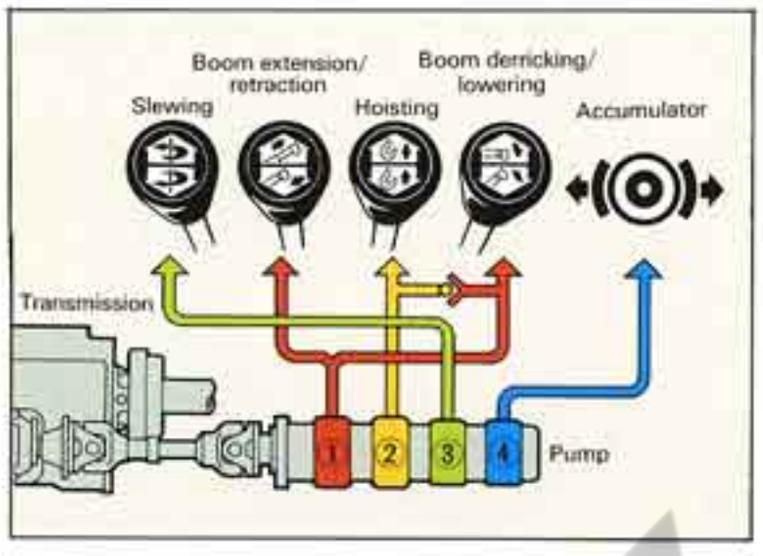
• **Controls on either side of undercarriage for independent, simultaneous outrigger operation . . .** All vertical and horizontal outrigger adjustments can be controlled independently and simultaneously by means of controls located on both sides of the undercarriage. The large stroke of the vertical cylinders permits quick, easy, levelling, even where conditions are poor, such as on sloping or uneven ground.

## *Hydraulic Front Jack Makes 360° Lifting Possible*

• A Hydraulic jack installed under the front extremity of the carrier chassis enables the crane to offer the same lifting performance in all directions. This means that there are fewer limitations caused by the orientation of the crane when it enters a site, boosts its operational range.

•Hydraulic front jack (Option)

# Independent Winches with Automatic Brakes for Greater Power, Speed and Operational Efficiency




## JUST THE JOB FOR COMPOUND OPERATIONS!

• The NK-200E-v features 2 independently-driven winches equipped with powerful automatic brakes. This feature is particularly useful in compound operations because the main and auxiliary winches are controlled by separate levers that permit them to perform hoisting and lowering operations independently yet at the same time. The result is faster operations and greater efficiency.

• The automatic brake prevents accidents resulting from incorrect operation, while the elimination of tiring pedal operations for the main and auxiliary winches represents a big reduction in operator workload.

**2-stage winch speed control**

• For greater operational versatility, combined dual hydraulic circuits permit 2-stage speed control of the main and auxiliary winches by means of independent levers, enabling the operator to vary the speed of the two winches between high and low without any loss of hoisting power.

## FOR TOTAL PEACE OF MIND... CAREFULLY DESIGNED SAFETY DEVICES

• Safety was a prime consideration during the design of the NK-200E-v, which is equipped with numerous safety devices, including the ACS Moment Limiter, an overhoisting prevention device, a slewing lock device, a boom derricking safety device, automatic brakes, an outrigger locking mechanism and hydraulic relief valves. All cylinders mounted in the boom, outriggers and so on are fitted with specially designed safety valves.

## CONVENIENT SLEWING SYSTEM WITH FREE-LOCK SWITCHING

• The slewing system can be locked for operations involving delicate slewing during high or heavy lifting or left free for simple back-and-forth work. The result is safe, efficient operation in a wide range of applications.

## *A SPECIAL HYDRAULIC SYSTEM COMPRISING 4 POWERFUL PUMPS PERMITS*

• The use of 4 separate pumps enables the NK-200E-V to perform 3 operations such as winch (hoisting, lowering), boom (derricking, telescorping) and slewing simultaneously and with outstanding speed and efficiency.

## TRIPLE SAFETY BACKUP GUARANTEES SURER BRAKING FOR GREATER SAFETY

• The winch mechanism is equipped with three separate safety features: an automatic brake, a counterbalancing valve and a drum lock. These are designed to eliminate the danger arising from operating error and assure safer, more positive operation.

**Tried and tested irregular winding prevention device**

• The drum is grooved and equipped with a device to prevent irregularities in rope feeding. This not only keeps the rope winding smoothly but also prolongs rope life.

**Non-rotating rope eliminates hook torsion**

• The use of non-rotating rope prevents tangling during operations and damage to the rope caused by twisting of the hook, resulting in smoother, safer operations.

# NK-200E-v

## FULLY HYDRAULIC TRUCK CRANE




NOTE: KATO PRODUCTS AND SPECIFICATIONS ARE SUBJECT TO IMPROVEMENTS AND CHANGES WITHOUT NOTICE

KATO
QUALITY & EXPERIENCE
SINCE 1895

**KATO WORKS CO.,LTD.**

9-37, Higashi-ohi 1-chome, Shinagawa-ku, Tokyo 140, Japan
Tel. : Head Office. Tokyo (03) 3458-1111
Overseas Marketing Department Tokyo (03)3458-1115
Telex : 222-4519 (CRKATO J)
Fax. : Tokyo (03) 3458-1151
Cable : CRANEKATO TOKYO

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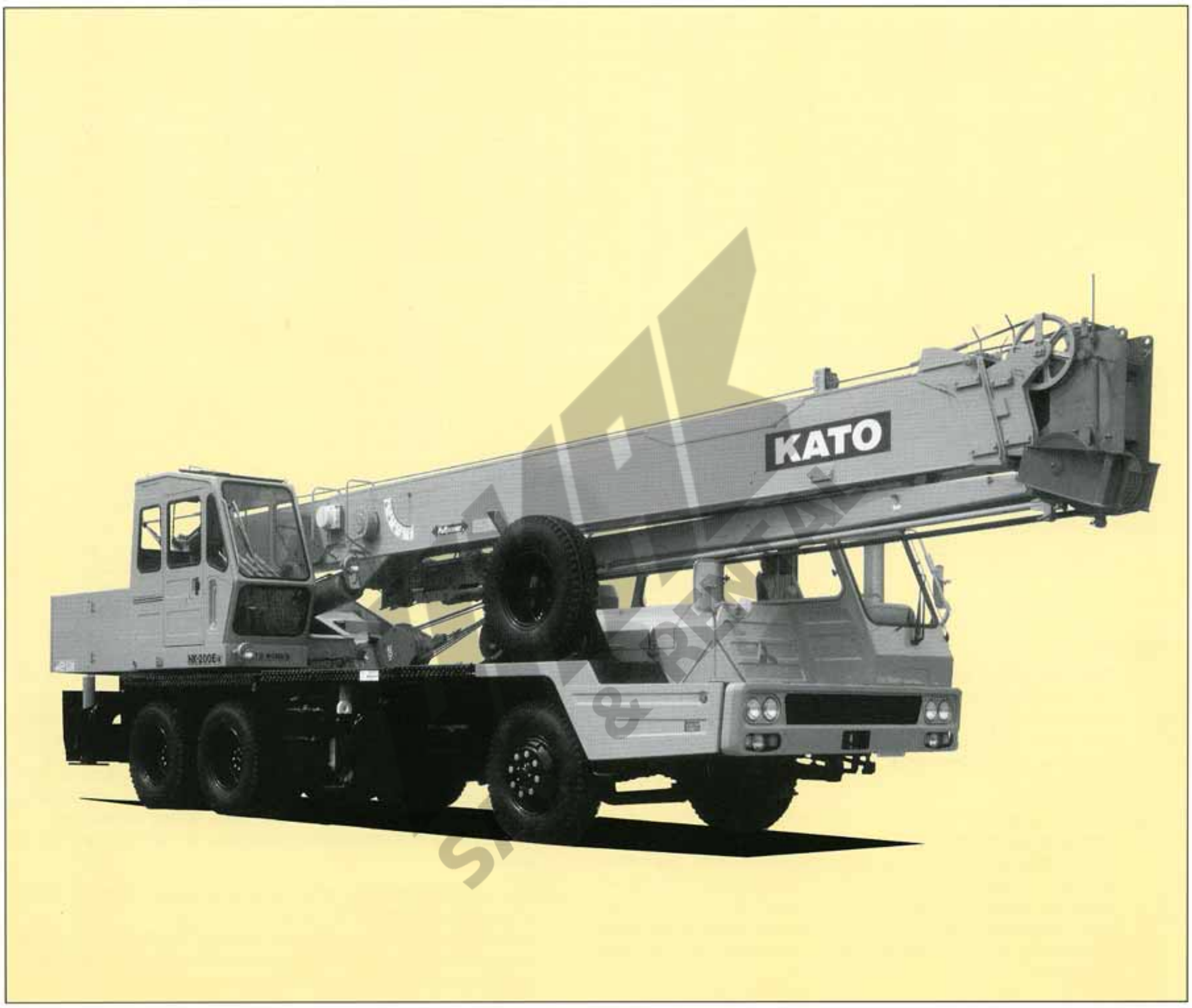
E227(Hp)Printed in Japan

KATO

# NK-200E-v

## FULLY HYDRAULIC TRUCK CRANE

## SPECIFICATION




KATO WORKS CO.,LTD.

• 10.5 m – 26.2 m Boom

26.2 m Boom + 7.5 m Jib
(Offset 5°)

26.2 m Boom + 7.5m Jib
(Offset 17°)

26.2m Boom + 7.5m Jib
(Offset 30°)

# RATED LIFTING CAPACITY

Based on BS 1757 : 1986
DIN 15019-2
75% of tipping loads

Note: Front jack is optional.

| Outriggers fully extended with front jack – 360° full range<br>Outriggers fully extended without front jack – over side and over rear | | | | Outriggers intermediately extended without front jack – 360° full range<br>Outriggers fully extended without front jack – over front | | | |
|---|---|---|---|---|---|---|---|
| Working radius (m) | 10.5 m Boom | 18.3 m Boom | 26.2 m Boom | Working radius (m) | 10.5 m Boom | 18.3 m Boom | 26.2 m Boom |
| 2.5 | 20.00 | | | 2.5 | 20.00 | | |
| 3.0 | 20.00 | | | 3.0 | 20.00 | | |
| 3.5 | 17.50 | 12.00 | | 3.5 | 17.50 | 12.00 | |
| 4.0 | 15.50 | 12.00 | | 4.0 | 15.20 | 12.00 | |
| 4.5 | 13.90 | 12.00 | | 4.5 | 11.65 | 12.00 | |
| 5.0 | 12.50 | 12.00 | 7.00 | 5.0 | 9.70 | 10.20 | 7.00 |
| 5.5 | 10.70 | 10.50 | 7.00 | 5.5 | 8.00 | 8.60 | 7.00 |
| 6.0 | 9.50 | 9.50 | 7.00 | 6.0 | 6.80 | 7.35 | 7.00 |
| 6.5 | 8.50 | 8.60 | 7.00 | 6.2 | 6.50 | 7.00 | 7.00 |
| 7.0 | 7.70 | 7.90 | 7.00 | 7.0 | 5.25 | 5.50 | 5.70 |
| 7.5 | 6.95 | 7.25 | 6.50 | 7.5 | 4.55 | 4.80 | 5.00 |
| 8.0 | 6.25 | 6.75 | 6.05 | 8.0 | 3.90 | 4.25 | 4.40 |
| 8.5 | 5.60 | 6.25 | 5.60 | 8.5 | 3.35 | 3.75 | 3.90 |
| 9.0 | | 5.75 | 5.30 | 9.0 | | 3.35 | 3.45 |
| 9.5 | | 5.35 | 5.00 | 10.0 | | 2.65 | 2.80 |
| 10.0 | | 4.90 | 4.75 | 11.0 | | 2.15 | 2.25 |
| 11.0 | | 4.15 | 4.10 | 12.0 | | 1.75 | 1.85 |
| 12.0 | | 3.55 | 3.50 | 13.0 | | 1.40 | 1.50 |
| 13.0 | | 3.10 | 3.00 | 14.0 | | 1.10 | 1.20 |
| 14.0 | | 2.70 | 2.60 | 15.0 | | 0.90 | 0.95 |
| 15.0 | | 2.30 | 2.25 | 16.0 | | 0.70 | 0.75 |
| 16.0 | | 2.00 | 2.00 | 17.0 | | | 0.60 |
| 16.5 | | 1.85 | 1.80 | | | | |
| 17.0 | | | 1.75 | | | | |
| 18.0 | | | 1.55 | | | | |
| 19.0 | | | 1.35 | | | | |
| 20.0 | | | 1.20 | | | | |
| 21.0 | | | 1.05 | | | | |
| 22.0 | | | 0.90 | | | | |
| 23.0 | | | 0.80 | | | | |
| 24.0 | | | 0.70 | | | | |
| 24.5 | | | 0.65 | | | | |
| Standard hook | for 20 ton | | | Standard hook | for 20 ton | | |
| Hook weight | 230 kg | | | Hook weight | 230 kg | | |
| Parts line | 7 | 4 | | Parts line | 7 | 4 | |
| Critical boom angle | — | — | — | Critical boom angle | — | — | 40° |

(Unit: Metric ton)

(Unit: Metric ton)

**NOTES:**

(1) The rated lifting capacities are the maximum load guaranteed on a firm level ground and include the weight of hook block and other lifting equipment. The capacities enclosed with bold lines are based on the structural strength of machine and the otehrs are based on the stability of machine.

(2) The working radii as given in the table are the actual values including the deflection of the boom. Therefore, operate the machine based on the working radius. However, the working radii shown for jib operations are based on the velues obtained when the boom is fully extended (26.2 m). Jib operations should be performed on the basis of boom angle only, regardless of boom length when the boom is not fully extended.

(3) The rated lifting capacities for the rooster sheave are equivalent to the rated lifting capacities for the main boom to a maximum of 3000 kg. At all times the weight of all lifting equipment in use (including main hook block suspended from boom head) forms part of load and must be subracted from the rated lifting capacity.

(4) If the boom length exceeds the specified value, the rated lifting capacities for the boom length above and below the present boom length should be referred to, and the crane should be operated within the smaller lifting capacity.

(5) When using the main boom with the jib installed, 550 kg plus the weight of hook block and other lifting equipment, etc., should be subtracted from the rated lifting capacities.
When performing the above operation, do not use the rooster sheave.

(6) The standard number of parts of line is shown in the rated lifting capacity table.
When the standard number of parts of line is not used, the minimum number of parts of line is determined so that weight per part will not exceed 3000 kg.

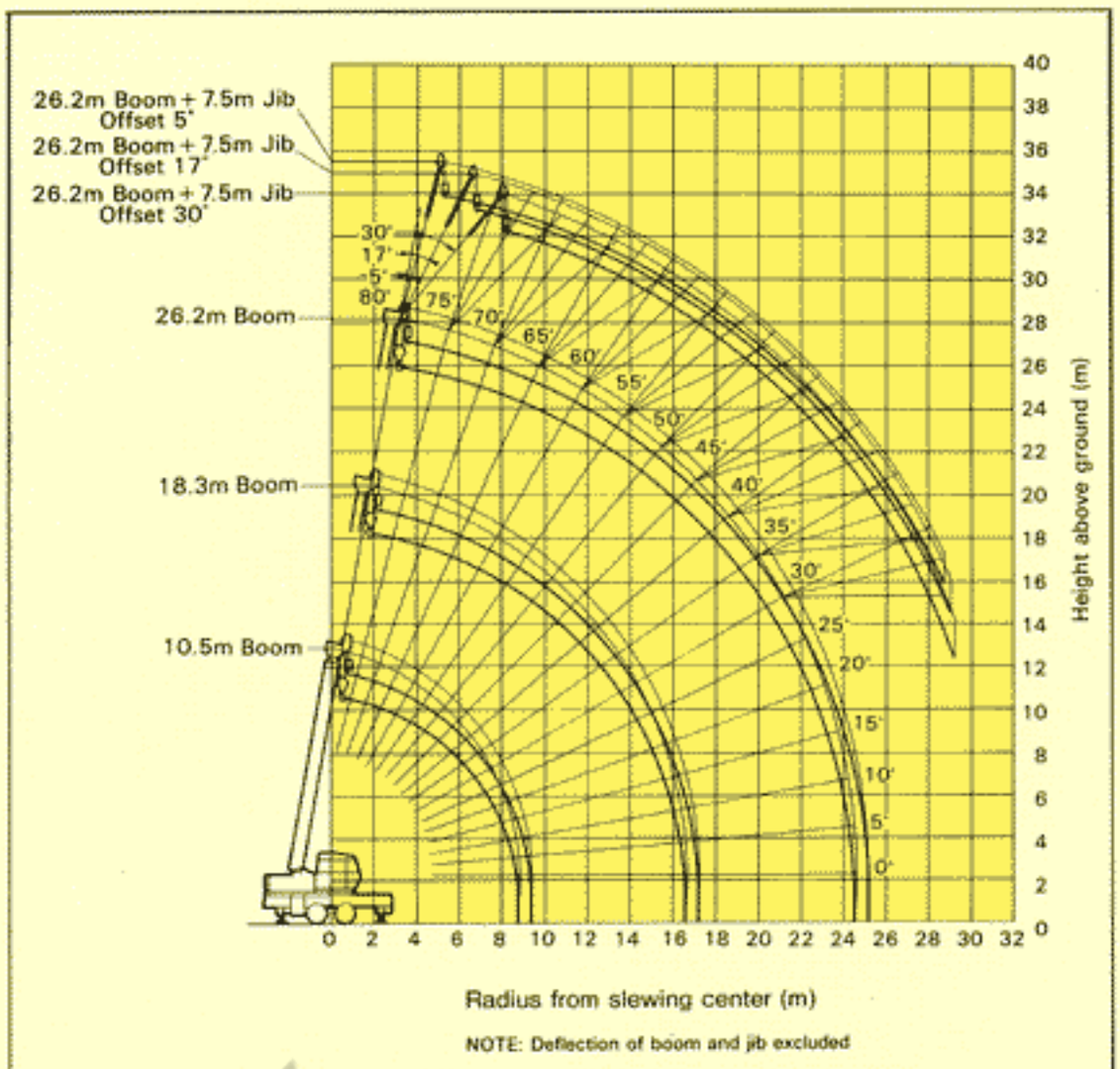
(7) Without front jack, over front lifting performance is inferior to over side and over rear lifting performance. Great care should be taken when transferring from over side to over front since there is a danger of overloading.

# WORKING RANGE

**Outriggers fully extended with front jack – 360° full range**
**Outriggers fully extended without front jack – over side and over rear**

| Boom angle (°) | 26.2 m Boom + 7.5 m Jib | | | | | |
|---|---|---|---|---|---|---|
| | Offset 5° | | Offset 17° | | Offset 30° | |
| | Working radius (m) | Load (t) | Working radius (m) | Load (t) | Working radius (m) | Load (t) |
| 80.0 | 6.6 | 2.50 | 8.0 | 1.75 | 9.4 | 1.30 |
| 73.0 | 10.2 | 2.50 | 11.4 | 1.75 | 12.7 | 1.30 |
| 72.5 | 10.5 | 2.45 | 11.7 | 1.75 | 12.9 | 1.29 |
| 70.0 | 11.9 | 2.25 | 13.0 | 1.67 | 14.1 | 1.25 |
| 65.0 | 14.6 | 1.96 | 15.7 | 1.51 | 16.7 | 1.17 |
| 60.0 | 17.2 | 1.75 | 18.2 | 1.38 | 19.0 | 1.12 |
| 55.0 | 19.6 | 1.59 | 20.6 | 1.29 | 21.2 | 1.08 |
| 53.6 | 20.3 | 1.55 | 21.3 | 1.26 | 21.9 | 1.07 |
| 49.3 | 22.1 | 1.25 | 23.0 | 1.20 | 23.6 | 1.04 |
| 46.9 | 23.1 | 1.11 | 23.8 | 1.08 | 24.6 | 1.03 |
| 40.0 | 25.5 | 0.82 | 26.2 | 0.79 | 26.7 | 0.78 |
| 35.0 | 27.3 | 0.65 | 27.7 | 0.64 | 28.0 | 0.64 |
| 30.0 | 28.7 | 0.53 | 29.1 | 0.52 | 29.2 | 0.52 |
| Standard hook | for 3 ton | | | | | |
| Hook weight | 60 kg | | | | | |
| Parts line | 1 | | | | | |
| Critical boom angle | — | | | | | |

(Unit: Metric ton)




NOTE: Deflection of boom and jib excluded

**Outriggers intermediately extended without front jack – 360° full range**
**Outriggers fully extended without front jack – over front**

| Boom angle (°) | 26.2 m Boom + 7.5 m Jib | | | | | |
|---|---|---|---|---|---|---|
| | Offset 5° | | Offset 17° | | Offset 30° | |
| | Working radius (m) | Load (t) | Working radius (m) | Load (t) | Working radius (m) | Load (t) |
| 80.0 | 6.6 | 2.50 | 8.0 | 1.75 | 9.4 | 1.30 |
| 73.0 | 10.2 | 2.50 | 11.4 | 1.75 | 12.7 | 1.30 |
| 72.5 | 10.5 | 2.45 | 11.7 | 1.75 | 12.9 | 1.29 |
| 70.0 | 11.9 | 2.26 | 13.0 | 1.67 | 14.1 | 1.25 |
| 67.3 | 13.2 | 1.77 | 14.5 | 1.58 | 15.5 | 1.21 |
| 65.2 | 14.3 | 1.46 | 15.5 | 1.31 | 16.7 | 1.18 |
| 60.0 | 16.9 | 0.90 | 18.0 | 0.82 | 18.9 | 0.78 |
| 54.5 | 19.4 | 0.52 | 20.4 | 0.48 | 21.3 | 0.46 |
| Standard hook | for 3 ton | | | | | |
| Hook weight | 60 kg | | | | | |
| Parts line | 1 | | | | | |
| Critical boom angle | 50° | | | | | |

(Unit: Metric ton)

(8) Critical boom angles for each boom length are shown on bottommost line of lifting capacity table.
If the boom angle is lowered to less than the critical boom angle, the machine will tip over without load. Therefore, never lower the boom below these angles.

(9) Free fall is adopted in principle to lower the hook only.
If it is necessary to lower a load by free fall, its weight should be less than 20% of the rated lifting capacity and abrupt braking should not be allowed.

(10) The machine will tip over or be damaged if operated with a load exceeding that specified in the rated lifting capacity table or not conforming to correct handling.
If such trouble occurs, the machine will not be warranted.

# SUPERSTRUCTURE SPECIFICATION

| | |
|---|---|
| Name and Type: | KATO NK-200E-v FULLY HYDRAULIC TRUCK CRANE |

**Performance**

| | | |
|---|---|---|
| Crane capacity: | 20.0t × 3.0m, 10.5m Boom with outriggers | |
| | 12.0t × 5.0m, 18.8m Boom with outriggers | |
| | 7.0t × 7.0m, 26.2m Boom with outriggers | |
| | 3.2t × 12.5m, 10.5—26.2m Boom Rooster sheave with outriggers | |
| | 2.5t × 10.2m, 26.2m Boom + 7.5m jib (Offset 5°) with outriggers | |
| | 1.75t × 11.7m, 26.2m Boom + 7.5m jib (Offset 17°) with outriggers | |
| | 1.3t × 12.7m, 26.2m Boom + 7.5m jib (Offset 30°) with outriggers | |
| Boom length: | Basic | 10.5m |
| | Maximum | 26.2m |
| Jib length: | | 7.5m |
| Max. lifting height: | | 26.0m (Boom) |
| | | 34.0m |
| | | (26.2m Boom + 7.5m Jib Offset 5°) |
| Main hoisting line speed: | | 110m/min (4th layer) |
| Auxiliary hoisting line speed: | | 95m/min (2nd layer) |
| Main hook hoisting speed: | | 15.7m/min (4th layer of wire rope) (7-part line) |
| Auxiliary hook hoisting speed: | | 95m/min (2nd layer of wire rope) (1-part line) |
| Boom derricking time: | | 44sec (−3° ~ 80°) |
| Boom derricking angle | | −3° ~ 80° |
| Slewing speed: | | 2.6 r.p.m. |
| | | * speed: subject to no load |

**Hydraulic System**

| | |
|---|---|
| Oil pump: | 4 section gear type |
| Hoisting motor: | Axial plunger type |
| Slewing motor: | Axial plunger type |
| Cylinder: | Double acting type |
| Control vale: | 3 position 4 way double acting with integral check and relief valves |
| Oil reservoir capacity: | 310 lit. |

**Superstructure**

| | |
|---|---|
| Hoisting mechanism: | Hydraulic motor-driven, gear reduction type (automatic brake system) single winch ×2 |
| Slewing mechanism: | Ball bearing type |
| Boom derricking mechanism: | Direct-acting cylinder type |
| Outrigger system: | Hydraulic, vertically supporting with float and vertical cylinder in single unit |
| Front jack (option): | Hydraulic, vertically supporting with float and vertical cylinder in single unit |

**Hoisting Ropes**

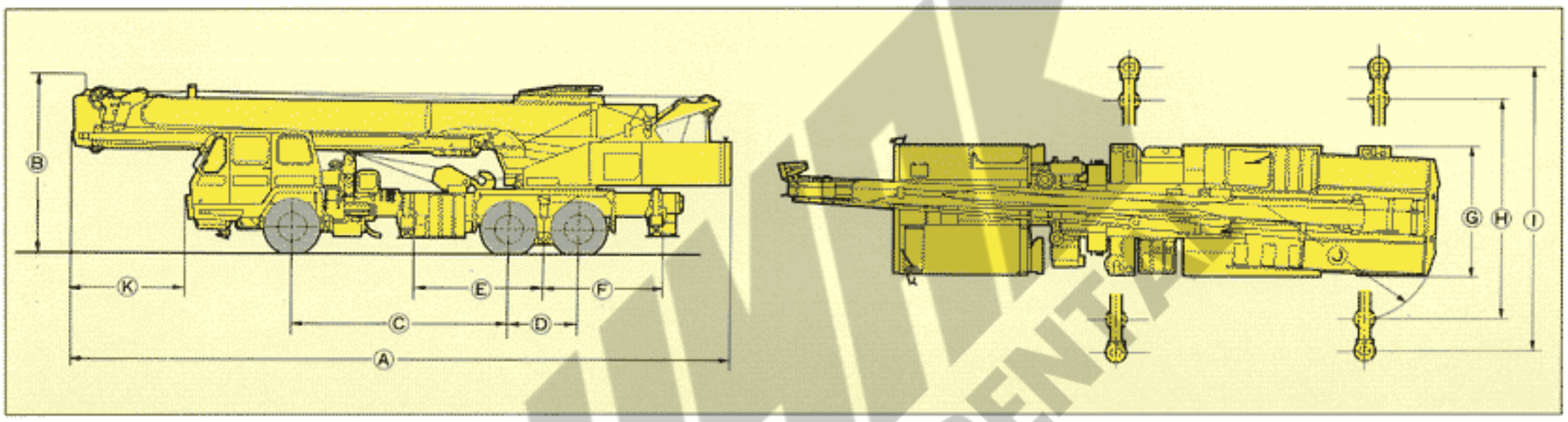
| | |
|---|---|
| Main: | 4 × F(a + 40)ϕ16 × 170m Non-rotating wire rope |
| Auxiliary: | 4 × F(a + 40)ϕ16 × 90m Non-rotating wire rope |

**Safety Device**

Microcomputer type ACS fully automatic overload protection device (Moment Limiter)
Boom falling safety device, Overhoist prevention device, Drum lock device, Automatic winch brake, Irregular winding prevention device, Hydraulic safety valve, Outrigger lock device, Slewing lock device

**Option**

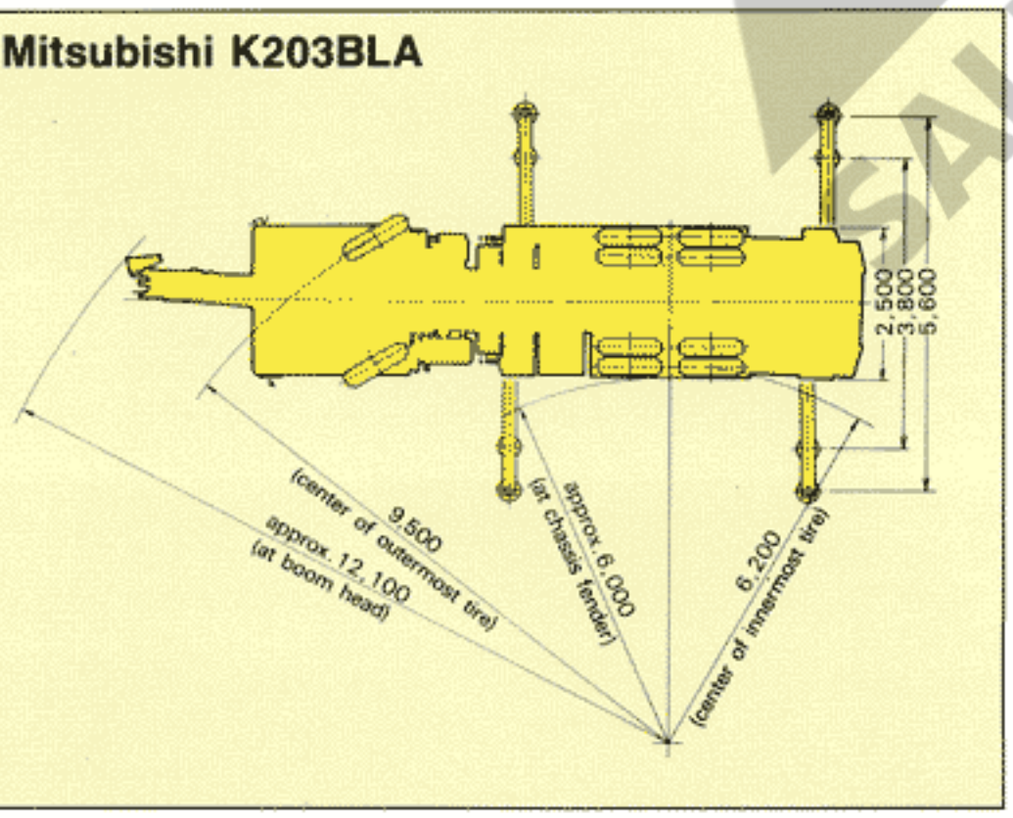
Oil cooler, Front jack, Voice alarm device for ACS, Heater, fan and radio for crane cabin
2 section fly jib (7.5 ~ 12 m)



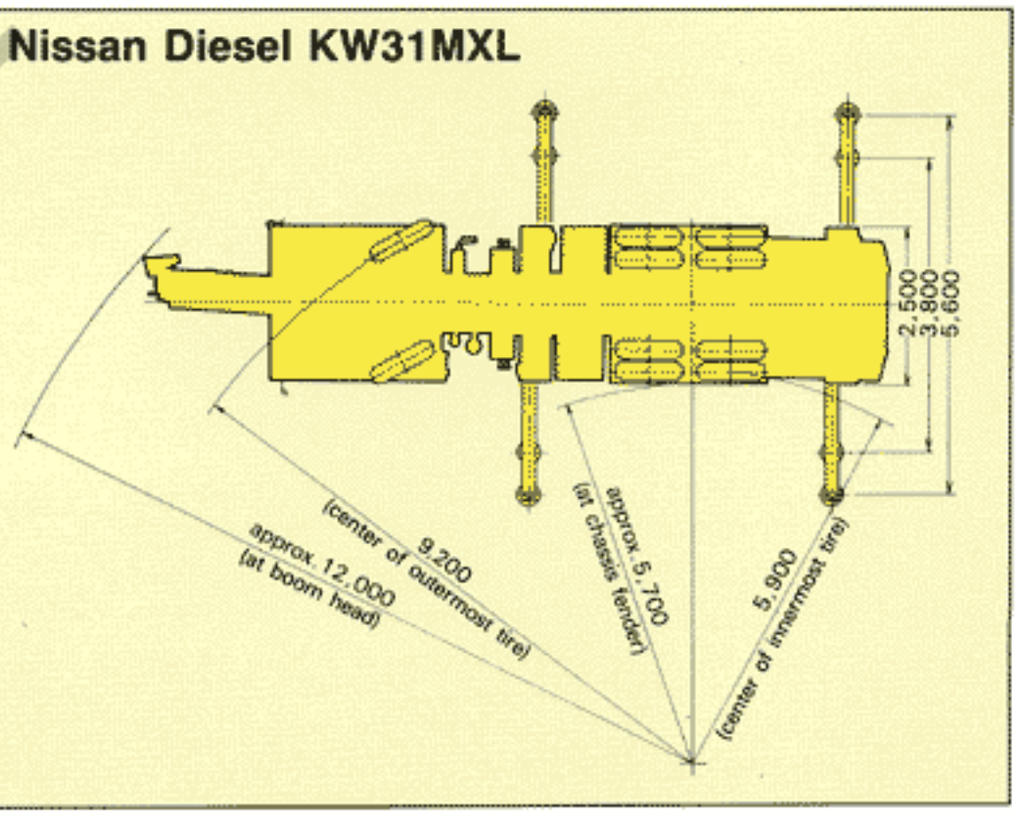

| Carrier name and model | A | B | C | D | E | F | G | H | I | J | K |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mitsubishi K203BLA | 12,430 | 3,300 | 4,050 | 1,300 | 2,400 | 2,200 | 2,500 | 3,800 | 5,600 | 3,220 | 2,300 |
| Nissan Diesel KW31MXL | 12,430 | 3,300 | 4,050 | 1,300 | 2,450 | 2,100 | 2,500 | 3,800 | 5,600 | 3,220 | 2,200 |

(Unit: mm)

**Mitsubishi K203BLA**




**Nissan Diesel KW31MXL**



# CARRIER SPECIFICATION

## MITSUBISHI K203BLA

| | |
|---|---|
| Maximum traveling speed: | 65km/h |
| Gradeability (tan$\theta$): | 31% (computed, @G.V.W. = 22,200kg) |
| Minimum turning radius (center of extreme outer tire): | 9.5m |

**General dimensions**

| | | |
|---|---|---|
| Overall length: | | approx. 12,430mm |
| Overall width: | | approx. 2,500mm |
| Overall height: | | approx. 3,300mm |
| Wheel base: | | 4,700mm |
| Treads: | Front | 2,050mm |
| | Rear | 1,845mm |
| Center to center of extended outriggers: | | 5,600mm (Fully extended)<br>3,800mm (Intermediately extended) |
| Gross vehicle weight: | | approx. 22,200kg |
| | Front | approx. 5,550kg |
| | Rear | approx. 16,650kg |

**Carrier**

| | |
|---|---|
| Maker: | MITSUBISHI |
| Model: | K203BLA |
| Drive system: | 6 × 4 |

**Engine**

| | |
|---|---|
| Maker: | MITSUBISHI |
| Model: | 6D22-1A |
| Type: | 4 cycle, water cooled, diesel |
| No. of cylinder: | 6-inline |
| Piston displacement: | 11,149cc |
| Max. output horsepower: | 225 PS/2,200 r.p.m.<br>165 KW/2,200 r.p.m. |
| Max. output torque: | 78 kg·m/1,400 r.p.m.<br>764 N·m/1,400 r.p.m. |

NOTE: The output is in accordance with JIS D1004, 1976. Rated power output guaranteed within 5% at standard ambient condition.

| | | |
|---|---|---|
| Clutch: | | Single dry plate, hydraulic control with air booster |
| Transmission: | | 5 forward & 1 reverse speed, synchromesh and constantmesh gear |
| Axles: | Front | Reverse "ELLIOT" type |
| | Rear | Full floating type |
| Steering: | | Ball nut type with power booster |
| Suspension: | Front | Semi-elliptic leaf springs with shock absorber |
| | Rear | Equalizer beams and torque rods |
| Brake: | Service | 2 circuit air brake, 6 wheels internal expanding type |
| | Parking & Emergency | Spring loaded brake, acting on 4 rear wheels, variable air operated |
| | Auxiliary | Exhaust brake |
| Electric system: | | 24V |
| Battery: | | 12V—115F51 × 2 |
| Fuel tank capacity: | | 200 lit |
| Driver's cab: | | All steel welded construction, 2 persons, low line type, offset left hand side |
| Tire size: | Front | 10.00—20—14PR |
| | Rear (dual) | 10.00—20—14PR |

## NISSAN DIESEL KW31MXL

| | |
|---|---|
| Maximum traveling speed: | 71km/h |
| Gradeability (tan$\theta$): | 36% (computed, @G.V.W. = 21,900kg) |
| Minimum turning radius (center of extreme outer tire): | 9.2m |

**General dimensions**

| | | |
|---|---|---|
| Overall length: | | approx. 12,430mm |
| Overall width: | | approx. 2,500mm |
| Overall height: | | approx. 3,300mm |
| Wheel base: | | 4,700mm |
| Treads: | Front | 2,025mm |
| | Rear | 1,860mm |
| Center to center of extended outriggers: | | 5,600mm (Fully extended)<br>3,800mm (Intermediately extended) |
| Gross vehicle weight: | | approx. 21,900kg |
| | Front | approx. 5,850kg |
| | Rear | approx. 16,050kg |

**Carrier**

| | |
|---|---|
| Maker: | NISSAN DIESEL |
| Model: | KW31MXL |
| Drive system: | 6 × 4 |

**Engine**

| | |
|---|---|
| Maker: | NISSAN DIESEL |
| Model: | PE6 |
| Type: | 4 cycle, water cooled, diesel |
| No. of cylinder: | 6-inline |
| Piston displacement: | 11,670cc |
| Max. output horsepower: | 230 PS/2,200 r.p.m.<br>169 KW/2,200 r.p.m. |
| Max. output torque: | 83 kg·m/1,300 r.p.m.<br>813 N·m/1,300 r.p.m. |

NOTE: The output is in accordance with JIS D1004, 1976.

| | | |
|---|---|---|
| Clutch: | | Single dry plate |
| Transmission: | | 6 forward & 1 reverse speed, |
| Axles: | Front | Reverse "ELLIOT" type |
| | Rear | Full floating type |
| Steering: | | Ball nut type with power booster |
| Suspension: | Front | Semi-elliptic leaf springs with shock absorber |
| | Rear | Equalizer beams and torque rods |
| Brake: | Service | 2 circuit air brake, 6 wheels internal expanding type |
| | Parking | Mechanical, acting on propeller shaft |
| | Auxiliary | Exhaust brake |
| Electric system: | | 24V |
| Battery: | | 12V—115F51 × 2 |
| Fuel tank capacity: | | 200 lit |
| Driver's cab: | | Steel, two men, semi under floor type one side cab |
| Tire size: | Front | 10.00—20—16PR |
| | Rear (dual) | 10.00—20—16PR |

# NK-200E-v

## FULLY HYDRAULIC TRUCK CRANE



*NOTE: KATO products and specifications are subject to improvements and changes without notice. If any options are included, specifications shown herein may change.

KATO
QUALITY & EXPERIENCE
SINCE 1895

**KATO WORKS CO.,LTD.**

9-37, Higashi-ohi 1-chome, Shinagawa-ku, Tokyo 140, Japan
Tel. : Head Office Tokyo (03) 3458-1111
Overseas Marketing Department Tokyo (03)3458-1115
Telex : 222-4519 (CRKATO J)
Fax. : Tokyo (03) 3458-1151
Cable : CRANEKATO TOKYO

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