

**KATO**

**Rough Terrain Crane**

**KR-250**

**ROUGHTERR**

**ACS** *Moment Limiter*

Lifting Capacity **25** Ton  
Metric



**KATO WORKS CO.,LTD.**

# Reach for the stars



## TOUGH LONG BOOM WITH LOW DEFLECTION

The sturdy fully powered boom is designed to reduce lateral and vertical deflection during operation, providing high speed telescopic extension from 8.4m to 26.7m with single lever control. Maximum lifting height above ground level is 34.4m (with 7m fly jib).

## UNIQUE FLY JIB WITH 3-STAGE OFFSET

The fly jib may be set at 5°, 17°, 30° offsets for up-and-over reach. This facilitates steel frame erection at close quarters on restricted sites, as well as providing high-lift and remote operation capabilities.

## SWING FORWARD FLY JIB

The swing-forward fly jib, which is stowed alongside the main boom, can be detached from the side of the boom by means of a hydraulic cylinder, and swung forward into working position. This mounting method requires far less space than is necessary for swing-around jibs. Setup is fast and simple even in restricted jobsites.



# Power that won't quit



## TURBOCHARGED ENGINE CAPABLE OF CONTINUOUS OPERATION OVER LONG PERIODS OF TIME

The powerful turbocharged engine has a reputation for high output, low fuel consumption, and low noise as well as all-round reliability. Its distinctive tenacity and enormous 185PS/2,800 r.p.m. power output guarantee outstanding acceleration and the ability to operate efficiently in even the most adverse working conditions.

HIGH OUTPUT!  
LOW FUEL CONSUMPTION!  
LOW NOISE!  
A HIGH-PERFORMANCE TURBO  
ENGINE

WITH **185 ps**



## AUTOMATIC LOCK-UP CLUTCH PROVIDES INCREDIBLE FUEL EFFICIENCY

A brand new torque converter has been adopted that can automatically lock the clutch at any of the 3 available speeds during traveling. A new transmission with an efficient gear ratio has also been added. These features produce superb acceleration and fuel efficiency.

## CONTINUOUS TRAVELING AT 57 K.P.H.

The powerful transmission, which delivers a constant 185ps of power, is equipped with high/low speed selection. The driver may select the most appropriate speed for any particular road conditions from among 6 forward and 6 reverse speeds.

The use of sprung suspension has allowed the KR-250 to improve top speed traveling to 57 k.p.h.. This factor allows the crane to travel quickly from job to job on site, leading to improved performance and productivity.



# Superb working environment



## DUAL WINCHES FEATURING AUTOMATIC & PEDAL BRAKE SYSTEM

The two large independently driven winches are installed to provide powerful automatic brake and pedal-operated brake switchover. The automatic brake is activated during powered hoisting/lowering operations, while the pedal-operated brake is used for free-fall operations. The main and auxiliary winches are operated by separate levers so that individual hoisting and lowering operations can be carried out simultaneously.

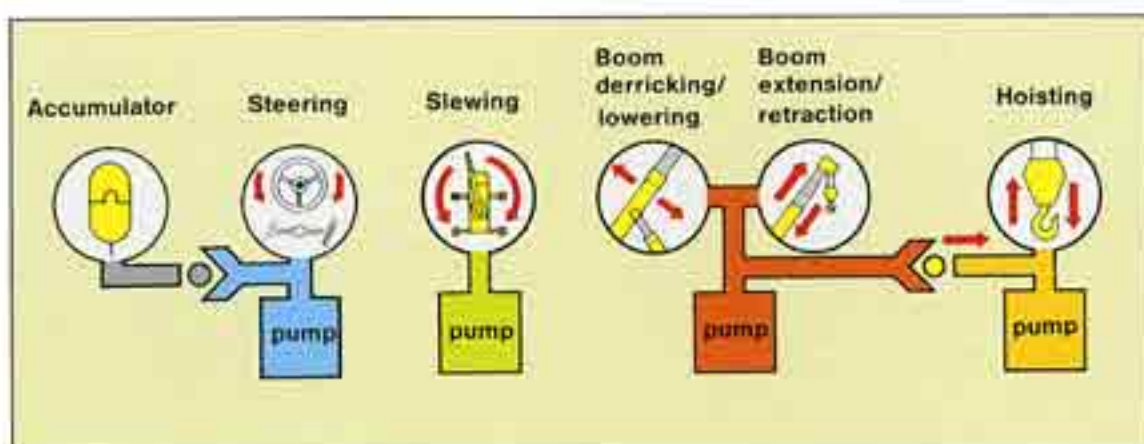
## STEPLESS SYSTEM FOR WINCH SPEED

By means of a combined double circuit system, the speed of the main and auxiliary winches can be selected at will, enabling high and low speed stepless switchover to be performed by lever operation without any reduction in hoisting capacity.



## 4-PUMP SYSTEM FOR SMOOTH COMPOUND OPERATIONS

The use of 4 separate pumps enables the KR-250 to perform 3 operations simultaneously, such as hoisting + boom telescoping + slewing, or hoisting + boom derricking + slewing, without these operations affecting either each other or the hydraulic regeneration of the accumulator. This makes operation smoother and more efficient.



## SPACIOUS AND FUNCTIONAL CAB WITH FORWARD VISIBILITY A PRIME PRIORITY

The spacious cab was designed with the operator in mind. Notice the ample leg room and comfortable interior, the increased forward visibility and the excellent ventilation. Important features like the ACS Moment Limiter and the various switches are located in easy-to-see, easy-to-reach places. This comfortable layout was planned to reduce operator fatigue and make operation easier and pleasanter.

The deluxe, fully adjustable operator's seat can be reclined at virtually any angle, and moved forward or backward, up or down, to suit of operators of any size and build.



# Technology that speaks for itself




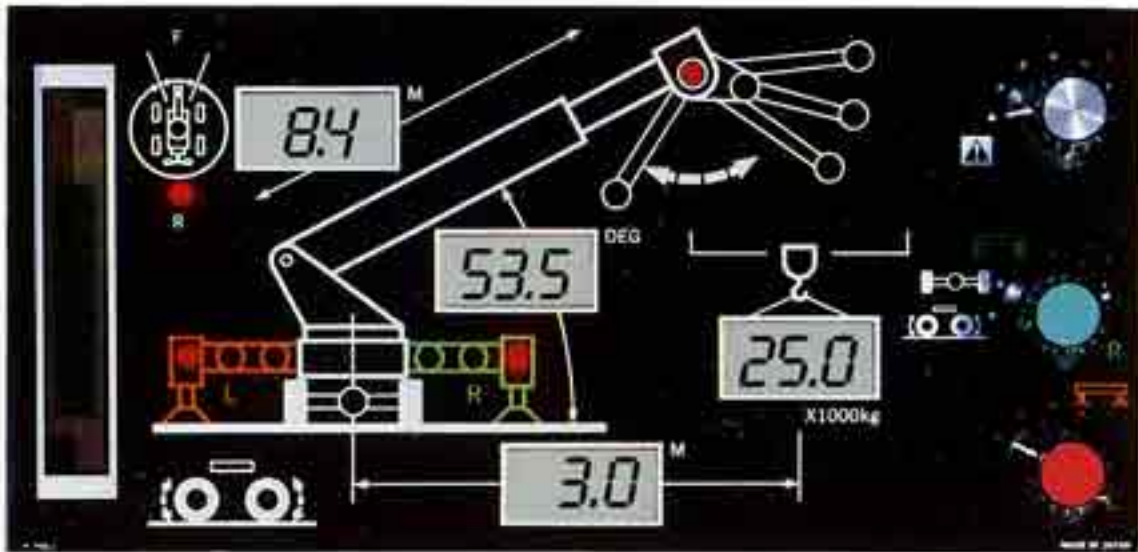
## UP-TO-THE-MINUTE MICROCOMPUTERISED ACS MOMENT LIMITER

The ACS moment limiter is a fully automatic overload prevention device which utilizes the latest electronics technology to monitor all safety factors. It provides accurate information on up to seven safety factors, namely: safety levels (total moment), boom angle, working radius, boom length, critical load, actual load, and maximum hook lift. The safety level comes in the form of a bar graph with colors indicating clearly the changing levels of safety.

The optional voice alarm reminds the operator to make preliminary checks and gives warning of overloads and other operational instructions.

## SAFETY EVEN IN THE EVENT OF ABNORMALITIES OR BREAKDOWNS

ACS moment limiter comes equipped with a trouble indicator to alert the operator in the unlikely event that something should go wrong with the ACS itself. The symbol  will light up and digital read-out will indicate the part affected.



The displays in this photograph have been simulated for the purpose of illustration only. The status shown is not an actual working position.



Outriggers can be controllable from operator's cab.

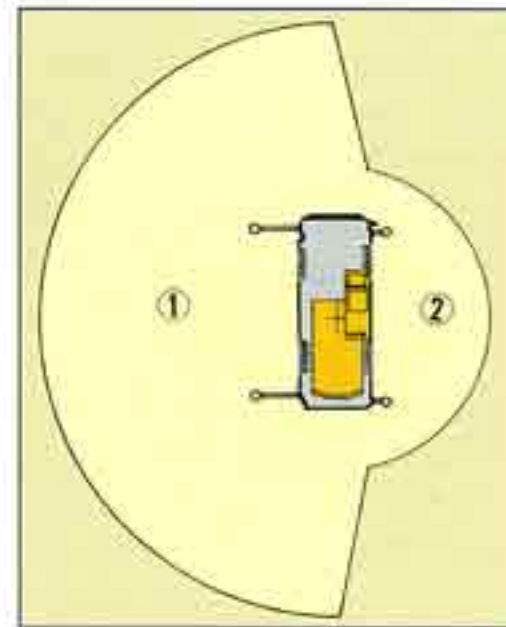


## WIDE OUTRIGGERS FOR COMPLETE SAFETY

The KR-250 comes with two sturdy sets of outriggers, the H-type and the X-type. Both provide a wide extension span for guaranteed operating performance. H-type outriggers can be set to four extension spans of 5.8m, 4.7m, 3.6m, and 2.08m (the X-type can be set for three). Both types give the crane extra stability for operating performance even on very small sites.

## ACS CONTROLS PERFORMANCE ACCORDING TO OUTRIGGER STATUS

Even when left and right outriggers are extended to different lengths, the ACS moment limiter automatically compensates for the varying safe working loads.



- ① Working range at maximum stroke
- ② Working range at intermittent stroke



Minimum Stroke 2.08 m

Intermittent Stroke 3.6 m

Intermittent Stroke 4.7 m

Maximum Stroke 5.8 m



Intermittent Stroke 3.6 m

Intermittent Stroke 4.7 m

Maximum Stroke 5.8 m

# Dazzling footwork

## 3 STEERING MODES ENSURE EASY TURNING

The driver can select 2-wheel drive, 4-wheel coordinated circle steering, or crab steering from the cab. In spite of its long wheel base, the minimum turning radius is a mere 4.9m in 4-wheel steering mode. Whether on crowded construction sites, or in narrow, twisting streets, 3 steering modes mean maximum manoeuvrability.

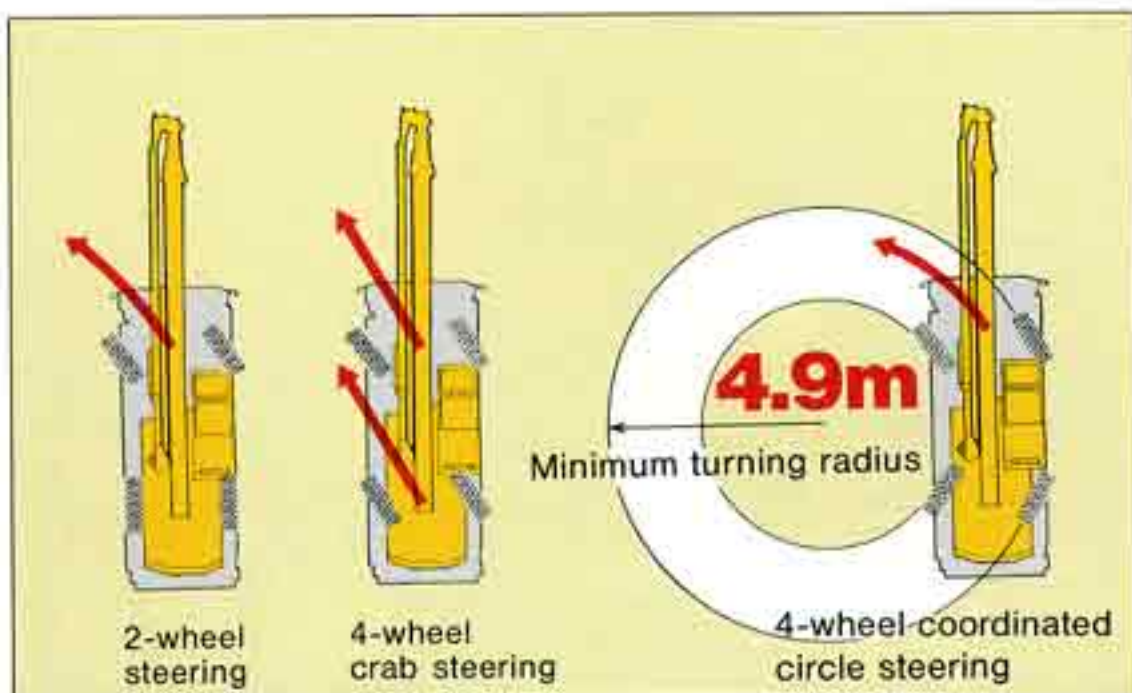
The hydraulic power steering ensures light handling and easy turning.

## INNOVATIVE REVERSE STEERING CORRECTION MECHANISM

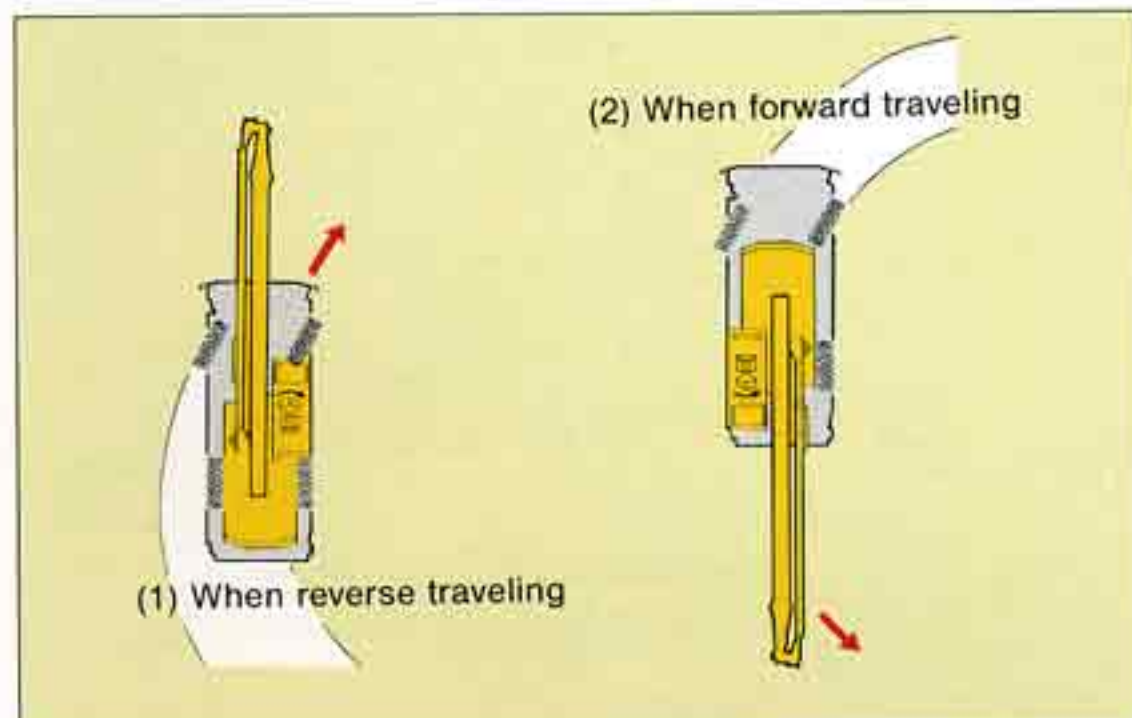
The reverse steering correction mechanism allows the same steering operation whether the superstructure is facing forwards or backwards. This handy mode lets the operator steer in the direction of travel regardless of which direction the superstructure faces.

## DISC BRAKES FOR EXTRA SAFETY

Front and rear wheels are equipped with disc brakes that feature excellent heat dispersion and outstanding braking power. Safe driving is guaranteed even when frequent stopping is required and on long downward slopes.



### ● The reverse steering correction mechanism



## RELIABLE PARKING BRAKE

A new large capacity parking brake has been adopted. Service brake lock equipment is provided for parking on sloping ground.

## STEADY PICK AND CARRY

The suspension may be locked from inside the cab with the flick of a switch. The sturdy carrier frame and heavy-duty tires with huge load-bearing capacities provide steady base for pick-and-carry duties.

## RUGGED TRACTION TIRES

The KR-250 is equipped with heat-resistant traction tires (14.00-24-24PR(OR)) that possess enormous load-bearing capacities. They provide power and grip for pick-and-carry duties on unimproved ground as well as being suited for traveling on soft ground and rugged terrain.



Rear wheel steering lock device

- (1) Forward travel: normal steering.
- (2) Reverse travel: When the superstructure advances in that direction, the operator can select the reverse steering correction mechanism at will so that the vehicle will turn in the same direction as the steering wheel.

# Safety you can rely on

## RELIABLE THREE-TIERED SAFETY CONSTRUCTION

The winch configuration includes three safety devices – automatic brakes, counterbalancing valves, and drum locks. These safeguards ensure safe, reliable operation in the knowledge that accidents stemming from operating errors will be prevented before they ever happen.

## SPECIAL NON-ROTATING ROPE KEEPS HOOK FROM SPINNING

Winch cables are made of a special non-rotating rope that will not tangle or twist. This not only prevents the hook from spinning, but also prevents damage to the cable itself.

## HIGHLY RELIABLE IRREGULAR WINDING PREVENTIVE DEVICE

Grooved drums and an irregular winding preventive device are provided to reduce wear and boost rope life.

## SLEWING SYSTEM WITH FREE/LOCK SWITCHING

The operator can select a free slewing stop for normal repeat work, or lock slewing stop for high-lift operations or heavy work. A hydraulic slew-brake is also provided for extra safety.



Slewing motor



## CAREFULLY DESIGNED SAFETY FEATURES

Safety was a prime consideration during the design of the KR-250. Among the numerous safety features incorporated are the ACS moment limiter, an overhoisting prevention device, a slewing lock, a boom dericking safety device, automatic brakes, an outrigger locking mechanism, hydraulic relief valves, and much more.

For safety while traveling, an overshift prevention device has been installed together with an emergency steering system, a rear wheel steering lock device, a brake fluid level warning buzzer and a suspension locking device to prevent any conceivable problem arising.

## EASY CHECKING AND MAINTENANCE

Vital parts such as the engine, torque converter, and transmission are already highly valued for their durability and reliability. These parts are sturdy and hardly ever malfunction, plus design is carefully thought out so as to facilitate maintenance checks and lubrication.

The following items of equipment are all options.

- Voice alarm device for ACS moment limiter
- Heater
- Cooler
- Defroster
- Oil cooler



# **KR-250** Rough Terrain Crane

## **ROUGHTERR**



NOTE: Illustrations may include optional equipment. KATO products and specifications are subject to improvements and changes without notice.



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