





# REALITY

#### The Power to Deal with Reality

It is always people that change the times. The potential within us offers a new future, constantly buffeted by the seas of change. Thus, the highest standards are continually improving, and with them the workplace. With the CKE-G series, we offer more capability than can be expressed in mere numbers. These capabilities contain the truth that we search for today.

Beyond power, we seek new environmental qualities that the earth holds and in answer, the CKE-G series responds with the truth demanded by the modern age. SATISFACTION

Reliable Power for People and the Planet



Refusing to compromise on ability, and made to push its abilities to the limit, the CKE-G series also faced other challenges. More efficient transport, an environmentally aware design ideology, control accurate to within tolerances of 1 cm, safety, and an attractive design were all factors that had to be considered. Everything about the CKE-G

series, including its handling of foundation and civil engineering work, revolutionizes the values of existing cranes, transforming it into a crane perfect for the modern age.

#### SPEEDY

### ENVIRONMENT

### FLEXIBILITY

### UTILITY&SAFETY

DESIGN

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#### When Maneuverability is a Must

How close can the CKE-G series to the ideal of a transport system based on maneuverability? The assembling and disassembling that go hand-in-hand with transporting a crane is always difficult. But faced with these challenges, we have achieved real progress in transportability. Built to exceed the expectations that stem from the varied transportation needs of many different nations, the CKE-G series is both efficient and economical, offering instant access to smooth, reliable transport.



# Unparalleled Efficiency That Will Revolutionize Transport

Our efforts to transform thinking about transporting equipment have resulted in greater efficiency in every possible area. We designed the CKE-G series to require less work and to be easier to transport, and to ensure safety during assembly and disassembly. What's more, simpler, more efficient loading for transport have reduced the cost of both transport and storage.



Thanks to its superbly rigid construction and the use of high-quality high tensile steel plate, we have been able to create a lightweight upper frame and body with a greatly reduced width.

Not only is assembly and disassembly efficient, the CKE-G series is also easy to transport.

#### Self-removal device for Efficient Assembly, Disassembly, and Operation

The self-removal device of the CKE-G series mean that the crawler, carbody weight, and counterweight can be assembled and disassembled without the assistance of another crane.





Model:CKE2500G-4

#### Six Major Attachments That Make Transport & Assembly More Efficient



#### A "nested boom" that is easy to transport

A nested boom allows the luffing insert jib to be stored in the middle boom. This reduces the number of vehicles needed for transport, and requires less space for storage.



The axle extension adapter can l folded for storage in the crawler.



emove "side steps"

Instead of the previous bolt attachment design, a new insertion design is used, making it possible to quickly attach or remove the side steps without the need for tools.



Ugs make assembly work easy and safe The lugs attached to the insert boom for lifting slings make boom assembly

prevents losses during assembly,

The guy cables can be fastened

safely and securely by inserting them in the boom, allowing them to be correctly positioned during transport.



#### In combination with the jib, this boom, which features a new design and increased lifting capacity, makes disassembly easier and reduces transport and storage costs. A DESCRIPTION OF A DESC Insert Boom Boom Top Luffing Boom Top Luffing Insert Jib Luffing B Luffing Jib Top MMMM Relay Jib Tapered Insert Boom

A "boom assembly/ disassembly mode" for increased safety

The CKE-G series is equipped with a seat switch separate to the automatic overload and over-hoist prevention systems, which can be set as a boom assembly/disassembly switch able to cancel the over-hoist prevention function. This function is automatically cancelled when the boom reaches a preset angle, while the LMI function is only cancelled automatically when the boom assembly/disassembly function is needed.



# ENVIRONMENT

Applying Energy-saving Concepts Everywhere

Environmental considerations are a common theme when creating anything, which is why there are daunting obstacles that must be overcome. Designed for use in any conceivable situation, the CKE-G series is equipped with functions for conserving energy – with the earth as its stage, it must meet the highest ecological standards.

# ENVIRONMENT

# The Beginning of a Cycle That **Contributes to the Environment**

We have raised the standards created for the environment by re-examining the energy we consume. Eliminating needless operations and innovating engine functions allowed us to reduce fuel consumption and transformed the mechanisms that move the crane into a cycle that benefits the environment.



#### "G-Engine" Improves Fuel Consumption by 10 %.

G-Engine keeps the engine running within fuel-efficient parameters by limiting maximum engine speed. Engine speed is reduced but pump capacity is controlled to maintain maximum winch speed for running or lifting. Using this "G-Engine" function improves fuel consumption by at least 10 % when compared to operations on a normal



G-Engine

# G-Winch

**Fuel-efficient** 

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# Idle Stop

### Reduced CO2 emissions

#### A New Clean Diesel System

Although diesel engines consume less fuel and emit less CO2 than gasoline engines, they also emit more harmful particulate matter and nitrogen oxide (NOx). The "new clean energy system" engine utilizes a DPF to reduce particulate matter and an SCR to reduce NOx.



#### Exhaust-cleaning SCR & DPF

SCR (Selective Catalytic Reduction) is an exhaust gas after-treatment system. It converts harmful NOx (nitrogen oxides), which are contained in the diesel engine exhaust gas, with the aid of a catalyst (AdBlue®) into harmless diatomic nitrogen and water. With the combination of a DPF (Diesel Particulate Filter) which is perfect for reducing PM (particulate matter), the exhaust gas from the engine is much cleaner and eco-friendly.

# An Idle Stop Function for Eco-driving.

The Auto Idle Stop (AIS) function stops the engine automatically in situations such as when you are waiting for the next trailer to come and have checked that everything is safe, reducing energy consumption in any operation, be it construction, or loading and unloading at a port. In addition to the AIS function, there is also a new manual stop function. In either case, simply turning the accelerator bar starts the engine again – there is no need to turn the key.

#### Option for European Market

### Bio Oil provides environment friendly solution.

More environmentally friendly hydraulic oil is also available, helping conserve the environment and meeting societal needs.

\*Please contact KOBELCO or a dealer in your country/region for details.

#### A Premium-fine Filter

A new hydraulic oil filter (the premium-fine filter) eliminates contamination. The cover prevents contamination from falling out when replacing the filter. The filter is large capacity type with built-in glass fiber filtering media for superior cleaning power and durability.





# FLEXIBILITY

#### Flexible Enough to Meet the Demands of Worksites

Our task was to create a crane capable of responding to the operator's every thought. Construction work demands excellent handling characteristics, and as such it was essential that this crane be adaptable enough to answer the demands of the operator in a wide variety of working environments. In the CKE-G series, it is advanced technology that powers the dynamic action so essential to a crane.

# FLEXIBILITY

# Flexibility Offers New Dimensions of Operational Performance

The CKE-G series offers new dimensions of flexibility for bucket, material handling and building construction. This allows the same crane to function equally well in any work environment, providing precision in any situation, and preventing any missed opportunities.

#### Switch between Dual and Independent circuit system

This crane offers the operator the choice of "independent circuits" that allow hydraulic pumps to drive the main and aux hoists and operate the boom independently, or "dual circuits" that use both pumps to drive hydraulic fluid together to operate the hoist motor; both circuits are available with a single touch. Whether working on bucket, material handling work site or building construction site, optimal performance is always available, resulting in improved operational efficiency.

### Completely independent main and secondary hoists for better composite operation

Completely independent circuits for the main and aux hoists provide even when using both hoists simultaneously, with no adverse effect on either circuit. As a result, this crane lets you demonstrate your true worth as a professional when working in construction, where positioning requires adjustments of as little as a single inch.

#### Dual circuits, perfect for bucket, material handling

The CKE-G series has been designed to dual hoist circuits equipped with a free-fall function, allowing the speed of both winches to be synchronized easily even when the load on the main and support hoists is different. This offers the powerful, speedy response needed for material, handling bucket in ports or foundation and civil engineering construction work. The CKE-G series is equipped with a separate pump for hoisting the boom, allowing smooth operation when hoisting boom and rope.

## Wet-type disk brake that offer powerful, stable braking

The winches feature Kobelco's independently developed wet brakes. Forced-oil-cooling makes these brakes resistant to the reduction in braking ability that occurs when temperatures rise, so that they are well suited to working for long periods. The use of multi-plate disks ensures sufficient braking capacity and means that braking can be performed with a modicum of force. What's more, the brakes themselves are compact and encased in drums.









#### Wide, large capacity drums

Both the brakes and reducing devices are encased within the drum, eliminating the need for a brake drum space, and increasing the width. Lap spooling keeps rope damage to a minimum, and the large spooling capacity reduces the chance of irregular spooling, extending the life of the wire rope significantly.



#### Reduced counterweight specification, for reduced impact on the work site

Each model has been equipped with reduced counterweight specification, allowing the number of counterweights to be cut, reducing the overall weight. Other aspects, such as the set weight of platform, are also flexible enough to cope with any worksite What's more, the counterweight detect system helps to prevent any configuration errors.

#### Intuitive, easy to understand interface

# Greater visibility of conventional functions! Display lamp



Camera monitors



#### Universally understood pictograms are used, providing intuitive, visual recognition!

- Switches



# UTILITY & SAFETY

Created from the User's Standpoint

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Ease of use and safety are two factors that support construction quality at its very roots. To achieve these, it is essential to consider the workplace environment, and more importantly, the user's point of view. Roomier, easier to use, and safer, the CKE-G series aims to achieve standards that raise the bar in terms of satisfaction in the workplace.

# UTILITY & SAFETY

# **Delivering Comfort and** Peace of Mind

The design of the CKE-G series represents a new approach to safety and the human senses. Together with improved safety, the layout of the cab space offers heightened levels of comfort and ease of use. What's more, consideration for safety permeates throughout the entire design, all with the aim of preventing accidents.



- 1 The adoption of a cross-member-less structure and the downward positioning of the wiper motors ensure a superior view from the operator's feet to directly overhead, greatly improving visibility. The field of view from the operator's seat has been improved by approximately 28 % over the conventional cabin design (horizontal angle of view \*eve height).
- 2 ML monitor is movable, so the angle can be adjusted as you wish for smoothing various checks and instructions.
- 3 Lower left window for left foot visibility
- 4 Joystick levers use easily held grips that fit the hand perfectly. They offer mobility, as well as instantaneous course changes and swing.
- \* Joystick levers are standard on G-series machines for the European market. Short levers are available as an option.
- 5 The enlarged left window opening and closing area increases the visibility of the winch drums and enables easy communication with workers during assembly work, improving safety on-site.
- 6 Ceiling blind is seamlessly adjustable.
- 7 Switches are concentrated on the left side of the cabin for improved ease of use.
- 8 An air suspension seat with a heater is available as an option. The operator feels as if it is wrapped around them, relieving fatigue during operation, and contributing to a comfortable working environment. The sliding width of the seat and lever stand has been enlarged to allow the operator to assume an optimal posture. A low headrest configuration allows for easy operation with a helmet on.



9 The highly efficient auto air conditioner has air outlets positioned so that the airflow directly reaches the operator's waist, neck, and face area.





- 10 Radio with Bluetooth® capabilities and a hands-free phone mount
- Radio with Bluetooth® Speakers



11 Full range of accessories



24 V power supply Optional 12 V power supply power supply

USB



Bottle holder

#### Double or triple redundant prevention of boom over-hoists

When hoisting the boom and jib, the primary boom (jib) over-hoisting prevention device automatically halts hoisting when the boom reaches a prescribed angle. When operating as a crane, the boom angle is observed using an angle to ground. For jib operations, the CKE-G series employs a system that measures the jib angle relative to both the ground and the machine, allowing quick detection of any danger. Moreover, it features a dual layer safety system, with a secondary boom (jib) over-hoisting prevention device equipped with an extreme limit function that will not allow the automatic stop to be overridden. The jib also features both primary and secondary over-hoisting protection devices that prevent boom reversal.



### Automatic soft-stop function that mitigates shock when automatic stop occurs

The over-hoisting prevention device prevents the boom from lowering and the jib from hoisting, and softens automatic stopping when the boom is overloaded, swinging sideways.

#### **Better state-recognition**

A variety of options, including a counterweight detect system, an over-swing preventative device, and a machine inclination sensor make it possible to assess main unit and attachment conditions more accurately.



#### Industry-standard automatic stop release switch

Replacing the system of separate keys used to override automatic stop functions for over-load, hook over-hoist, and boom over-hoist, the CKE-G series employs a more reliable two-stage system utilizing a master key and individual switches. A single master key poses no administrative difficulties, and prevents easy override of the automatic stop.



#### Highly acclaimed safety devices of all types

- A swing flasher and warning buzzer that warning people in the surround areas when swinging.
- A one-way call system to ensure operator safety
- Function lock lever to prevent accidental operation
- Easily-seen crawler movement directional markings
- · External alarms when moving or swing
- M/L external display lights informing those in the surrounding area of the load state of the crane
- Rear / main and aux hoist drum / boom hoist state drum camera and monitor (color)

#### Option for European Market

#### Tilting Cab

A tilting device allows the cab to be tilted up to 15 ° to provide the operator with an excellent view and a relaxed and safe working environment when lifting loads higher-up.



Tilting Cab

#### Tractor-Type Tracks (2 types)

- Flat shoe type provides a smoother ride.
- Triple grouser type provides a smoother ride and additional grip.



Flat shoe type

# DESIGN

#### Designed to Delight All Who Operate

Outstanding visibility and a sense of openness, a space anyone can spend time in comfortably, a simple yet sophisticated design, and a sense of connection with the crane - the newly designed cabin is a *delight* to everyone who operates a Kobelco crane.

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#### Open

#### Open front view

The A-pillar is sloped, and the apex is positioned at the rear of the cabin. The adoption of a cross-member-less structure and the downward positioning of the wiper motors ensure a superior view from the operator's feet to the overhead window, greatly improving visibility. Straight glass reduces light refraction, and the wiping area is enlarged to ensure clear visibility at all times.



#### Comfortable

#### Anytime, anywhere, comfortable

Comfort-enhancing features include a light-touch sliding door, automatic air conditioner that cools the cabin quickly and efficiently, a spacious interior around the arms and shoulders with reduced switches and flat interior panels. A full range of accessories are available on request.



#### Simple but Luxury

#### Just the right sense of luxury

In pursuit of functional beauty, the cabin's bright rear interior panel provides a sense of openness, alongside optimized, functional interior materials, a step-less adjustable ceiling blind.



#### Unison

#### Sense of connection with crane

The operator will feel at one with the crane, a feeling of total control, thanks to a fatigue-free seat or an ML monitor that improves both visibility and crane operability.

Machine images include optional equipment.



Land, Sea, and Sky - the World is Full of workplaces



Land, sea, or sky – there is literally no limit to the locations where Kobelco's cranes may be called upon to work. From tall buildings that seem to pierce the heavens, huge bridges spanning the sea, expressways that support transport on land, to airport construction site access routes, the CKE-G series is set to be a major player in the coming years.

We offer a comprehensive lineup in every field, with detailed functions that meet the differing needs of any worksite. The CKE-G series is crystallization of technology we have developed through our quest for the highest standard in cranes, one that has continued since we completed the first truck crane ever made in Japan in 1953, and demonstrates to perfection our abilities in worksites throughout the world.





LINE-UP		
Model		CKE1350G-4
CRANE BOOM		
Max. Lifting Capacity Max. Length	100 t* x 3.6 m 90 t x 3.9 m *1 61.0 m	150 t x 4.4 m *1 76.2 m
FIXED JIB		
Max. Lifting Capacity	10.9 t x 18.0 m	26.8 t x 16.0 m
Max. Jib Length	18.3 m	30.5 m
Max . Combination	51.8 m + 18.3 m	61.0 m + 30.5 m
LUFFING JIB		
Max . Lifting Capacity	NA	36.0 t x 12.0 m
Max. Jib Length	NA	53.3 m
Max . Combination	NA	44.8 m + 53.3 m, 47.9 m + 32.0 m
MAIN & AUX. WINCH		
Max. Line Speed (1st layer)	120 m/min	
Max. Line Pull	208 kN {21.2 tt*2}	234 kN {23.8 tt*2}
Kated Line Pull (Single line)	112 KN {11.4 tt}	132 KN {13.5 tt}
Wire Rope Diameter	26 mm	20 mm
Wite nope Length	Wet type multiple disc broke (Optional)	Wet type multiple dies brake (Optional)
Swing Speed	4 0 min <sup>-1</sup> {rnm}	2 1 min <sup>-1</sup> {rnm}
Travel Speed	17 / 11 km/h	1.3 / 0.9 km/h
POWER PLANT	,	
Model	ISUZU 6HK1	ISUZU 6UZ1
Engine Output	210 kW / 1,900 min <sup>-1</sup>	270 kW / 2,000 min <sup>-1*3</sup>
Fuel Tank	400 L	400 L
HYDRAULIC SYSTEM		
Main Pumps	3 variable displacement	4 variable displacement
Max. Pressure	31.9 MPa {325 kgf/cm <sup>2</sup> }	31.9 MPa {325 kgf/cm <sup>2</sup> }
Oil Quantity (at the reference level)	375 L	455 L
SELF-REMOVAL DEVICE		
	NA	Counterweight / crawler self-removal device
WEIGHT		
Operating Weight	90.3 t	137.9 t
Ground Pressure	101.8 kPa	107.9 kPa
Counterweight	31,900 kg (31,310 kg*4)	55,000 kg
Iransport Weight (Base Machine)	41,280 kg *6	31,740 kg *8
	2 E00 mm*10	2,000 mm*10
Transportation Width	2,400 mm	2,990 IIIII*10
	3,400 IIIII 5 120 mm	الالتان 3,303 الالتان د 210 mm
	2,130 11111 200 mm	0,310        010 mm
	6 280 mm	7 895 mm
Tail Swing Radius	4 500 mm (4 700 mm*4)	5 500 mm
run owing nuurus		0,000 mm

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\*1: Auxiliary sheave is necessary
\*2: Referential performance. Max. line pull is not based on wire rope strength
\*3: Engine speed is set at 1,850 min<sup>-1</sup> in power mode
\*4: With optional counterweights
\*7: Base machine with boom base, gantry, wire ropes (front/rear/boom drum), self-removal device, translifter
\*8: Base machine with gantry, wire ropes (front/rear/boom drum)
\*9: Base machine with gantry, wire ropes (front/rear/boom drum), self-removal device, translifter
\*8: Base machine with gantry, wire ropes (front/rear/boom drum)

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CKE2500G-4	CKE800G-3	CKE1100G-3
250 t x 4.6 m	80 t x 3.0 m	110 t x 3.6 m *1
91.4 m	54.9 m	70.1 m
27.0 t x 10.4 m	7.0 t x 20.0 m	10.9 t x 22.0 m
30.5 m	18.3 m	21.3 m
76.2 m + 30.5 m	42.7 m + 18.3 m, 45.7 m +12.2 m	61.0 m + 21.3 m
80.0 t x 9.8 m	NA	NA
61.0 m	NA	NA
61.0 m + 61.0 m	NA	NA
110 m/min 252 kN {25.7 tf*2} 132 kN {13.5 tf} 26 mm	120 m/min 153 kN {15.5 tf*2} 78.0 kN {8.0 tf} 22 mm 220 m (Main) 130 m (Aux )	120 m/min 208 kN {21.2 tf*2} 108 kN {11.0 tf} 26 mm 265 m (Main) 235 m (Aux )
Wet-type multiple disc brake (Optional)	Wet-type multiple disc brake (Optional)	Wet-type multiple disc brake (Optional)
2.2 min <sup>-1</sup> {rpm}	4.0 min <sup>-1</sup> {rpm}	3.2 min <sup>-1</sup> {rpm}
1.0 / 0.5 km/h	1.7 / 1.1 km/h HINO .I08F-YD	1.4 / 1.0 km/h HINO JO8E-YD
270 kW / 2,000 min <sup>-1*3</sup>	213 kW / 2,100 min <sup>-1</sup>	213 kW / 2,100 min <sup>-1</sup>
400 L	400 L	400 L
4 variable displacement	3 variable displacement	4 variable displacement
31.9 MPa {325 kgf/cm²}	31.9 MPa {325 kgf/cm²}	31.9 MPa {325 kgf/cm²}
550 L	375 L	455 L
Counterweight / crawler self-removal device	Counterweight self-removal device (Option)	Counterweight / crawler self-removal device
222.8 t	75.7 t	102.1 t
113.4 kPa	84.8 kPa	95.9 kPa
91,000 kg	27,200 kg (26,120 kg* <sup>4</sup> )	34,600 kg
44,770 kg *9	39,780 kg * <sup>5</sup>	35,240 kg *7
2,990 mm* <sup>10</sup>	3,500 mm* <sup>10</sup>	2,990 mm* <sup>10</sup>
3 385 mm * <sup>11</sup>	3 380 mm	3 195 mm * <sup>11</sup>
7,620 mm	5,130 mm	5,300 mm
1,220 mm	800 mm	900 mm
8,970 mm	6,280 mm	6,770 mm
6,000 mm	4,300 mm (4,500 mm*4)	4,860 mm

and self-removal device  $\star$ 5: Base machine with boom base, gantry, crawler, wire ropes (front/rear/boom drum), step  $\star$ 6: Base machine with boom base, gantry, crawler, wire ropes (front/rear/boom drum) mast, wire ropes (front/rear/boom drum)  $\star$ 10: Without side catwalk  $\star$ 11: Without crawler  $\star$  The value is theoretical result

Note: Standard equipment may vary depending on your areas or countries. Due to our policy of continuous product improvements all designs and specifications are subject to change without prior notice.

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