

# KOBELCO

Performance  Design

## ED160 *BLADE RUNNER*

- Bucket capacity:  
0.38–0.50 m<sup>3</sup> ISO heaped
- Engine power:  
78.6 kW
- Operating weight:  
16,400–17,700 kg



**We Save You Fuel**  
Achieving a Low-Carbon Society



# Performance Design

With the release of the ED160BR-7, KOBELCO has completely harmonised the values of PERFORMANCE and DESIGN. The ED160BR delivers greater efficiency and productivity with increased power and speed, along with uncompromising operator comfort and machine operability.

In the pursuit of producing unique and unbeatable machines that provide comfort and productivity without equal, KOBELCO continues to rise to the challenge.



# THE ULTIMATE SLEEK AND STYLISH CAB DESIGN

True ergonomic functionality combined with modern design has resulted in a cabin interior that is sleek and comfortable, built for simplicity and operator comfort.

## Jog dial

The jog dial integrates multiple functions to allow for simple navigation of machine information screens, even while wearing gloves.

## LED backlights

LED backlighting on switches and dials provides a bright, clear view of controls, even in the dark, while delivering a premium look and feel.



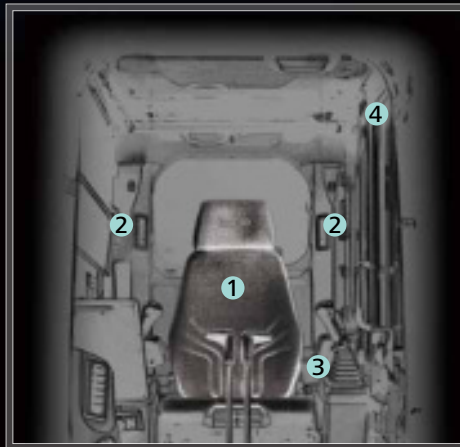




# UNFORGETTABLE COMFORT

## ① Air suspension seat

A GRAMMER seat is installed as standard equipment, which achieves excellent shock absorption and superior ride comfort.



## ② Optimal air conditioning vent placement

Air conditioning vents are optimally placed around the cabin with air flow directed toward the operator's neck and back, providing more comfortable operation.

## ③ Ergonomic and low-effort pilot control levers

Pilot control levers are mounted on adjustable consoles, with an ergonomic design that allows movement without twisting, reducing operator fatigue.



## New hydraulic control

Our newly upgraded hydraulic control system responds to shorter lever strokes than previous models, delivering swifter, more precise movement and improved lever operability.

## ④ LED door light

The LED interior light automatically turns on when the door is opened or when the ignition is set to OFF. This ensures easy entry and exit at nighttime.



KOBELCO



04:33



SETTING MENU



PICTURE OF CAMERA



CLOCK SETTING



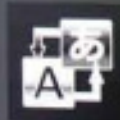
SCREEN BRIGHTNESS



MAINTENANCE



CONSUMPTION



LANGUAGE SELECTION



FLOW RATE 260 L/min



# A WIDER VIEW BRINGS A WIDER RANGE OF USE

## 10-inch colour monitor—the largest in the industry

The easy-to-operate menu screen facilitates easy reading and navigation. Images from the built-in cameras can be checked on the large screen, which helps to improve safety. In addition, each icon is easily recognisable.



The right camera and rear camera (right side view mode)



The right camera and rear camera (straight view mode)



The bird's-eye view

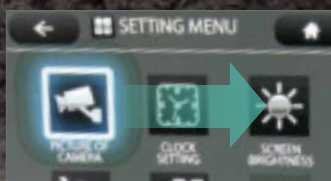


The eagle eye view



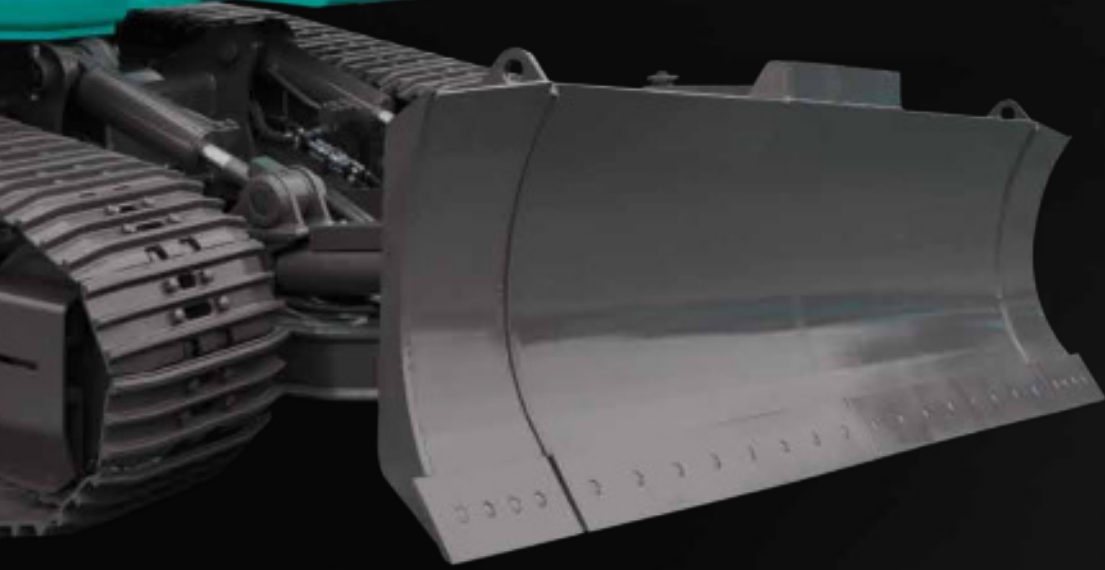
## Safety on full display

Our high-resolution, large display shows right, left and rear side cameras together. Multiple camera modes allow operators to customise their display based on their needs to enhance awareness and jobsite safety.



## Screen display linked with the jog dial operation

The jog dial provides simple and intuitive control of all display screens. Turn the jog dial to the right or left to select an item and press the dial to confirm the selection.



### Power, Angle and Tilt capability (PAT)

The 6-way dozer blade has Power, Angle and Tilt capability (PAT) operated from the cab. With a single control lever, the blade can be angled 25 degrees to the left or right for dispensing earth and materials away for the operator's path. The blade also tilts up on the left and right sides by 445 mm for slope grading, culverts and ditches.

## THE NEXT LEVEL OF PERFORMANCE

### Our high-power engine complies with Tier 4 Final emission regulations

Compared to previous models, the engine output is significantly increased, which shortens the digging cycle time substantially. It attains high performance without reducing the speed even when a heavy load is applied or when travelling up a slope.

Model: ISUZU 4JJ1XDRAC-01

#### Engine output

**78.6 kW/2,200 min<sup>-1</sup>**

ISO9249 with fan



#### Digging cycle time

Shortened by **10%**

(Compared to the ED160BR-5 model)



## Large capacity dozing

ED160 Blade Runner has the power to doze and backfill in all recommended operating positions.

Dimensions:

**3,260 mm** (width) x **810 mm** (height)

Working ranges:

**790 mm** (height), **600 mm** (depth)

Drawbar pulling force: **195 kN**

Dozer capacity: **1.6 m<sup>3</sup>**



## Plenty of ground clearance

Excellent ground clearance ensures unhindered travel.






# GREATER MULTI-FUNCTION CAPABILITIES





## Attachment mode

The flow-rate modes of the bucket, breaker, nibbler, and rotating grapple are set before delivery, which allows you to start operating immediately. Mode settings for other attachments, such as the tilt rotator, can easily be added or changed.



# ATTACHMENT CONTROL MODES

	TYPE	MODE	OBJECTIVE OF MODE
CURRENT MODE		Bucket	Balanced operation is provided, with precision control for operations such as levelling.
		Breaker	The arm regeneration function is adjusted, and considers the additional weight of the front attachment.
		Nibbler (crusher)	Hydraulics are optimised to reduce the effect of opening/closing the nibbler (crusher) on arm speed, allowing smooth control.

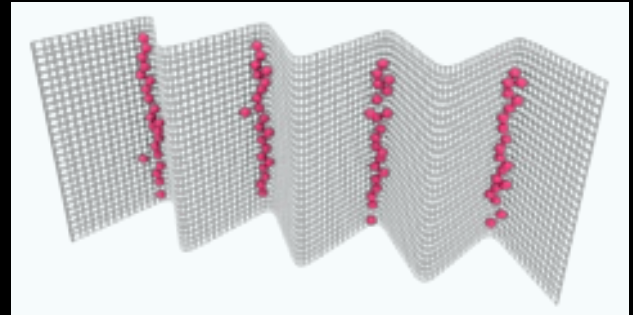
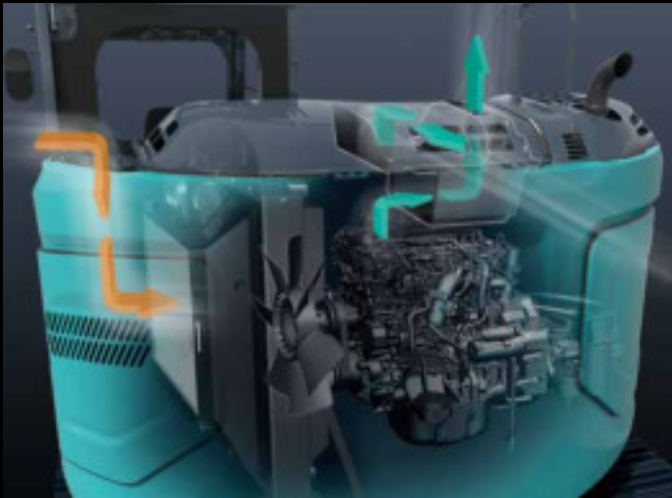
	TYPE	MODE	OBJECTIVE OF MODE
NEWLY ADDED MODE		Rotating grapple	Simultaneous swing operation while raising the attachment is possible, even on a slope, aided by a 2-speed proportional valve system on the boom circuit.
		Processor	The N&B flow rate is set to maximum performance. Regeneration of arm in operation while using the front attachment is changed.
		Thumb bucket	Operation is optimised to allow swing operation while simultaneously raising the attachment and opening thumb.
		Tilt rotator	Multi-function of the hydraulic operations is optimised, preventing hydraulic interference while using the tilt rotator.
		Spare mode for custom setting	A spare attachment control mode is provided to allow for customisation of hydraulic settings, for specific attachment usages not described above.

## Adjustment for hydraulic flow

Machine operability characteristics and prioritisation of hydraulic flow can be adjusted by technicians, for customised performance.



# NON-STOP OPERATION BY iNDr



How the filter catches dust

## iNDr Filter

A high-density stainless steel mesh filter blocks dust and debris from entering the cooling package during air intake. This prevents the cooling package and air cleaner from clogging, allowing the machine to maintain cooling performance. The ridges of the corrugated filter allow air to pass through, while the grooves collect dust and debris, preventing the filter from clogging.

# GEOSCAN

## Excavator Remote Monitoring System

## Total Support for Machines with Network Speed and Accuracy

GEOSCAN is a telematics system for receiving machine information. Manage your machines anywhere in the world using the Internet. Location, workload and diagnostic data aid business operations.

### Direct Access to Operational Status

#### Location Data

Accurate location data can be obtained even from sites where communications are difficult.

#### Fuel Consumption Data

Data on fuel consumption and idling times can be used to indicate improvements in fuel consumption.

#### Operating Hours

A comparison of operating times of machines at multiple locations shows which locations are busier and more profitable. Operating hours on site can be accurately recorded, for running time calculations needed for rental machines, etc.

#### Graph of Work Content

The graph shows how working hours are divided among different operating categories, including digging, idling, travelling, and optional operations (N&B).

## GEOSCAN



### Maintenance Data and Warning Alerts

#### Machine Maintenance Data

Provides maintenance status of separate machines operating at multiple sites. Maintenance data is also relayed to KOBELCO service personnel, for more efficient planning of periodic servicing.

### Security System

#### Engine Start Alarm

Sends a notification if the engine is started outside of pre-defined hours.

#### Area Alarm

Sends a notification if the machine leaves a pre-defined area.

# CONVENIENT AND SENSIBLE EQUIPMENT



## Wiper adjustment function

In addition to the intermittent wiper mode and continuous wiper mode, the one-time wiper mode was added.



## Adjustable height pilot control levers

Operator can adjust height of attachment control levers.



## AM/FM Bluetooth® (hands-free) radio

Audio streaming and hands free phone calling capability.

\*Bluetooth® is a registered trademark of the Bluetooth SIG Inc.



## USB port / 12V power outlet



## Smartphone holder

You can use the holder with your smartphone connected to the USB port.



## Opening Top guard

The Top guard is hinged, allowing easy access to the top window for serviceability.



## Ground level AdBlue® tank

\*AdBlue® is a registered trade mark of the Verband der Automobilindustrie e.V. (VDA).



Right camera



Left camera



Rear camera

## Built-in rear, left and right side cameras

# Specifications



## Engine

<b>Model</b>	ISUZU MOTORS LIMITED 4JJ1XDRAC-01
<b>Type</b>	Four-cycle, liquid-cooled, direct injection diesel, turbo charged complies with Tier 4 Final exhaust emission regulation
<b>No. of cylinders</b>	4
<b>Bore and stroke</b>	95.4 mm x 104.9 mm
<b>Displacement</b>	2.999 L
<b>Rated power output</b>	78.6 kW/2,200 min <sup>-1</sup> (ISO 9249: with fan) 86 kW/2,200 min <sup>-1</sup> (ISO 14396: without fan)
<b>Max. torque</b>	354 N·m/1,800 min <sup>-1</sup> (ISO 9249: with fan) 375 N·m/1,800 min <sup>-1</sup> (ISO 14396: without fan)



## Hydraulic system

<b>Pump</b>	
<b>Type</b>	Two variable displacement piston pumps + two gear pumps
<b>Max. discharge flow</b>	2 x 142 L/min 1 x 22 L/min (Pilot), 1 x 67 L/min (Dozer)
<b>Relief valve setting</b>	
<b>Boom, arm and bucket</b>	34.3 MPa
<b>Travel circuit</b>	34.3 MPa
<b>Swing circuit</b>	28.0 MPa
<b>Dozer circuit</b>	24.5 MPa
<b>Control circuit</b>	5.0 MPa
<b>Pilot control pump</b>	Gear type
<b>Main control valves</b>	12-spool
<b>Oil cooler</b>	Air cooled type



## Swing system

<b>Swing motor</b>	One fixed displacement piston motor
<b>Brake</b>	Hydraulic; locking automatically when the swing control lever is in the neutral position
<b>Parking brake</b>	Wet multiple plate
<b>Swing speed</b>	11.0 min <sup>-1</sup>
<b>Tail swing radius</b>	1,490 mm
<b>Swing torque</b>	40.4 kN·m



## Attachments

Backhoe bucket and combination

Use			Backhoe bucket		
			Normal digging		
Bucket capacity	ISO heaped	m <sup>3</sup>	0.38	0.45	0.50
	Struck	m <sup>3</sup>	0.28	0.35	0.38
Opening width	With side cutter	mm	800	915	1,000
	Without side cutter	mm	740	855	940
No. of teeth			4	4	5
Bucket weight		kg	340	360	390
Combination	2.38 m arm		○	○	◎
	2.84 m arm		◎	△	×

◎ Standard   ○ Recommended   △ Loading only   × Not recommended



## Travel system

<b>Travel motors</b>	Variable displacement piston, two-speed motors
<b>Travel brakes</b>	Hydraulic brake
<b>Parking brakes</b>	Wet multiple plate
<b>Travel shoes</b>	40 each side
<b>Travel speed</b>	2.4/4.8 km/h
<b>Drawbar pulling force</b>	195 kN (SAE)
<b>Gradeability</b>	70% {35°}



## Cab & control

<b>Cab</b>	
All-weather, sound-suppressed steel cab mounted on the silicon-sealed viscous mounts and equipped with a heavy, insulated floor mat	
<b>Control</b>	
Two hand levers and two foot pedals for travel	
Two hand levers for excavating and swing	
Electric rotary-type engine throttle	



## Boom, arm & bucket

<b>Boom cylinders</b>	100 mm x 1,092 mm
<b>Arm cylinder</b>	115 mm x 1,116 mm
<b>Bucket cylinder</b>	100 mm x 903 mm



## Dozer blade

<b>Dozer cylinder</b>	114 mm x 210 mm
<b>Dimensions</b>	3,260 mm (width) x 810 mm (height)
<b>Working ranges</b>	790 mm (up) x 600 mm (down)
<b>Max. tilt height</b>	445 mm
<b>Angle</b>	25 degrees



## Refilling capacities & lubrications

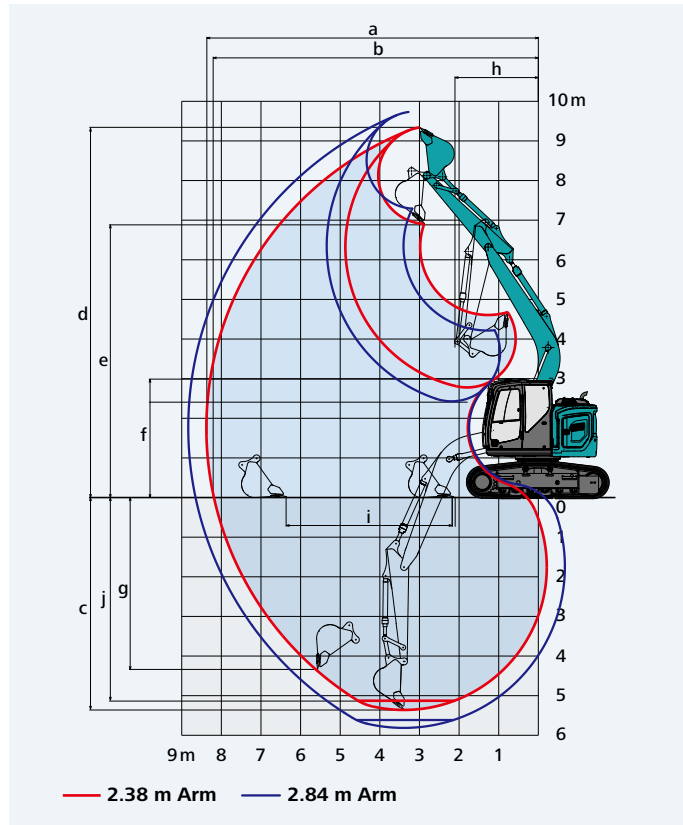
<b>Fuel tank</b>	186 L
<b>Cooling system</b>	17 L
<b>Engine oil</b>	17 L
<b>Travel reduction gear</b>	2 x 4.5 L
<b>Swing reduction gear</b>	1.65 L
<b>Hydraulic oil tank</b>	89.9 L tank oil level 190 L hydraulic system
<b>DEF/Urea tank</b>	26 L



## Working ranges

Unit: m

Boom	4.68 m	
Range \ Arm	2.38 m	2.84 m
a- Max. digging reach	8.37	8.81
b- Max. digging reach at ground level	8.17	8.62
c- Max. digging depth	5.36	5.79
d- Max. digging height	9.34	9.73
e- Max. dumping clearance	6.91	7.30
f- Min. dumping clearance	2.78	2.44
g- Max. vertical wall digging depth	4.34	4.77
h- Min. swing radius	2.13	2.52
i- Horizontal digging stroke at ground level	4.22	4.71
j- Digging depth for 2.4 m (8') flat bottom	5.13	5.60
Bucket capacity ISO heaped m <sup>3</sup>	0.50	0.38



## Digging force (ISO 6015)

Unit: kN

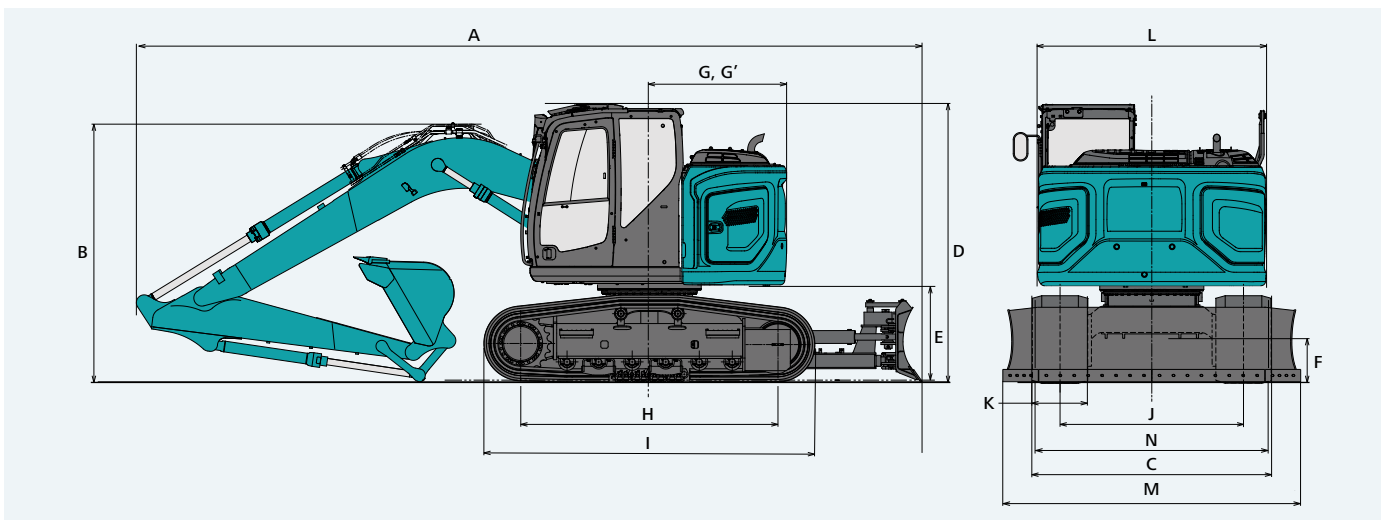
Arm length	2.38 m	2.84 m
Bucket digging force	105.4	
Arm crowding force	64.0	58.0

## Dimensions

Unit: mm

Arm length	2.38 m	2.84 m		
A Overall length	8,550	8,640	G' Distance from centre of swing to rear end {additional counterweight}	1,490 {1,600**/1,670***}
B Overall height (to top of boom)	2,820	3,180	H Tumbler distance	2,800
C Overall width of crawler (600 mm shoe)	2,590		I Overall length of crawler	3,600
D Overall height (to top of cab)	3,020		J Track gauge	1,990
E Ground clearance of rear end*	1,030		K Shoe width	600
F Ground clearance*	455		L Overall width of upperstructure	2,480
G Tail swing radius {additional counterweight}	1,490 {1,610**/1,670***}		M Overall width (blade wings extended)	3,260
			N Folding blade width	2,460

\*Without including height of shoe lug \*\*580 kg counterweight \*\*\*1,000 kg counterweight

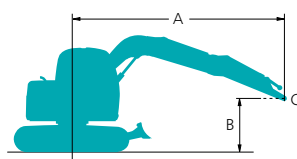


# Operating weight & ground pressure

Boom: 4.68 m Arm: 2.38 m Bucket: 0.5 m<sup>3</sup> ISO heaped bucket Dozer: with

Shoes (mm)	Curved triple grouser shoes					
	500		600		600	
Counterweight	standard		+ 580 kg		+ 1000 kg	
Ground pressure (kPa)	53.5	45.2	55.4	46.8	56.7	47.8
Operating weight (kg)	16,800	17,000	17,400	17,600	17,800	18,000

## Lift capacities



Rating over front



Rating over side or 360 degrees

A - Reach from swing centreline to arm top

B - Arm top height above/below ground

C - Lift point

Relief valve setting: 34.3 MPa

ED160BR Arm: 2.38 m Counterweight: 1,720 kg Shoe: 600 mm Dozer: blade up Bucket: without												
B \ A	1.5 m		3.0 m		4.5 m		6.0 m		At max. reach		Radius	
7.5 m	kg									*2,180	*2,180	4.06 m
6.0 m	kg					*3,390	*3,390			*1,780	*1,780	5.68 m
4.5 m	kg			*4,470	*4,470	*3,730	3,640	2,760	2,280	*1,660	*1,660	6.57 m
3.0 m	kg			*6,840	6,280	4,210	3,380	2,660	2,180	*1,670	*1,670	7.03 m
1.5 m	kg			*5,040	*5,040	3,910	3,110	2,530	2,070	*1,780	1,590	7.13 m
G.L.	kg			*6,320	5,350	3,730	2,950	2,440	1,980	2,000	1,640	6.90 m
-1.5 m	kg	*5,680	*5,680	7,390	5,380	3,690	2,910	2,430	1,970	2,270	1,850	6.30 m
-3.0 m	kg	*9,370	*9,370	*6,180	5,540	3,780	2,990			3,070	2,470	5.20 m

ED160BR Arm: 2.38 m Counterweight: 1,720 + 580 kg Shoe: 600 mm Dozer: blade up Bucket: without												
B \ A	1.5 m		3.0 m		4.5 m		6.0 m		At max. reach		Radius	
7.5 m	kg									*2,180	*2,180	4.06 m
6.0 m	kg					*3,390	*3,390			*1,780	*1,780	5.68 m
4.5 m	kg			*4,470	*4,470	*3,730	*3,730	3,030	2,500	*1,660	*1,660	6.57 m
3.0 m	kg			*6,840	*6,840	*4,520	3,710	2,930	2,410	*1,670	*1,670	7.03 m
1.5 m	kg			*5,040	*5,040	4,230	3,440	2,810	2,290	*1,780	*1,780	7.13 m
G.L.	kg			*6,320	5,940	4,140	3,280	2,720	2,210	*2,010	1,830	6.90 m
-1.5 m	kg	*5,680	*5,680	*7,910	5,970	4,090	3,240	2,700	2,200	*2,510	2,070	6.30 m
-3.0 m	kg	*9,370	*9,370	*6,180	6,130	4,190	3,320			*3,340	2,750	5.20 m

ED160BR Arm: 2.38 m Counterweight: 1,720 + 1,000 kg Shoe: 600 mm Dozer: blade up Bucket: without												
B \ A	1.5 m		3.0 m		4.5 m		6.0 m		At max. reach		Radius	
7.5 m	kg									*2,180	*2,180	4.06 m
6.0 m	kg					*3,390	*3,390			*1,780	*1,780	5.68 m
4.5 m	kg			*4,470	*4,470	*3,730	*3,730	3,230	2,670	*1,660	*1,660	6.57 m
3.0 m	kg			*6,840	*6,840	*4,520	3,950	3,130	2,580	*1,670	*1,670	7.03 m
1.5 m	kg			*5,040	*5,040	4,610	3,680	3,010	2,460	*1,780	*1,780	7.13 m
G.L.	kg			*6,320	*6,320	4,430	3,520	2,920	2,380	*2,010	1,970	6.90 m
-1.5 m	kg	*5,680	*5,680	*7,910	6,390	4,390	3,480	2,900	2,370	*2,510	2,220	6.30 m
-3.0 m	kg	*9,370	*9,370	*6,180	*6,180	*4,250	3,560			*3,340	2,940	5.20 m

### Note:

- Do not attempt to lift or hold any load that is greater than these lifting capacities at their specified lift point radius and heights. Weight of all accessories must be deducted from the above lifting capacities.
- Lifting capacities are based on machine standing on level, firm, and uniform ground. User must make allowance for job conditions such as soft or uneven ground, out of level conditions, side loads, sudden stopping of loads, hazardous conditions, experience of personnel, etc.
- Arm top defined as lift point.
- The above lift capacities are in compliance with ISO 10567. They do not exceed 87% of hydraulic lift capacity or 75% of tipping load. Lift capacities marked with an asterisk (\*) are limited by hydraulic capacity rather than tipping load.
- Operator should be fully acquainted with the Operator's and Maintenance Instructions before operating this machine. Rules for safe operation of equipment should be adhered to at all times.
- Lifting capacities apply to only machine as originally manufactured and normally equipped by KOBELCO CONSTRUCTION MACHINERY CO., LTD.

## STANDARD EQUIPMENT

### ENGINE

- Engine, ISUZU 4JJ1XDRAC-01, diesel engine with turbocharger and intercooler (Tier 4 Final compliant engine)
- Auto Idle Stop
- Automatic engine deceleration
- Batteries (2 x 12 V - 80 Ah)
- Starting motor (24 V - 4 kW), 50 amp alternator
- Engine oil pan drain cock
- Double element air cleaner

### CONTROL

- Working mode selector (H-mode, S-mode and ECO-mode)
- Extra N&B piping (proportional hand controlled)
- Quick hitch piping

### SWING SYSTEM & TRAVEL SYSTEM

- Swing rebound prevention system
- Straight propel system
- Two-speed travel with automatic shift down
- Sealed & lubricated track links
- 600 mm curved shoe
- Grease-type track adjusters
- Automatic swing brake
- Tilt angle dozer blade
- Lower frame guard
- Travel alarm

### MIRROR, LIGHTS & CAMERAS

- Rear view mirror, rear view camera, left side view camera and right side view camera
- Eagle eye view
- Three front working lights (two for boom and one for right storage box)

### CAB & CONTROL

- Two control levers, pilot-operated
- Horn, electric
- Integrated left-right slide-type control box
- Cab light (interior)
- Coat hook
- Large cup holder
- Detachable two-piece floor mat
- GRAMMER air suspension seat with heater
- Retractable seatbelt
- Headrest
- Handrails
- Intermittent windshield wiper with double-spray washer
- Skylight
- Openable top guard (ISO 10262: 1998)
- Tinted safety glass
- Pull-up type front window and removable lower window
- Easy-to-read 10-inch LCD SCREEN multi-display monitor
- Emergency escape hammer
- Radio (AUX & Bluetooth®)
- 12 V converter
- Remote machine monitoring system "GEOSCAN"
- USB port
- Automatic air conditioner
- Hands-free telephone

## OPTIONAL EQUIPMENT

- 2.84 m arm
- 500 mm curved shoe
- Front-guard protective structure (may interfere with bucket action)
- LED cab additional lights
- Wide range of buckets

- Rain visor (may interfere with bucket action)
- Add-on counterweight (+ 580/1,000 kg)
- Roll sun shade
- Multi control valve

**Note:** Standard and optional equipment may vary. Consult your KOBELCO dealer for specifics.

Bluetooth® is a registered trademark of the Bluetooth SIG Inc.

Note: This catalogue may contain attachments and optional equipment that are not available in your area. And it may contain photographs of machines with specifications that differ from those of machines sold in your areas. Please consult your nearest KOBELCO distributor for those items you require. Due to our policy of continuous product improvements all designs and specifications are subject to change without advance notice. Copyright by **KOBELCO CONSTRUCTION MACHINERY CO., LTD.** No part of this catalogue may be reproduced in any manner without notice.

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