KOBELCO

Your competitive edge.

70SR	
WT	*16,400 lb.*
HP	*54 SAE NET*
BKT CAP	*.23~.53 cu yd*

SHORT RADIUS Hydraulic Excavator

KOBELCO

KOBELCO 70SR

KOBELCO 70SR

The Most Awesome Machine In It's Class!

With 54 net horsepower and weighing-in at 16,400 lbs, Kobelco's innovative 70SR Hydraulic Excavator is setting a new standard for the 7-ton size class. Designed for endurance and built with the same quality Kobelco is known for, the 70SR features True Zero Tail Swing — A Kobelco exclusive in the 7-ton class.

If your needs call for an excavator that will work in tight conditions, the 70SR is simply the best machine for the job.

FEATURES

CAB & CONTROLS

Kobelco knows that operator comfort has a direct influence on performance. That's why we have created an ideal balance between comfort and logistics in the 70SR's ergonomical cab design. Controls are sensibly located for ease of use, there's a fully adjustable suspension seat and control console, and air conditioning is standard. Effective lighting, both inside the cab and on the machine's exterior, provides excellent visibility in low light situations.

A Redesigned Cab

- Improved visibility all around the machine
- Easier cab access while maintaining the same width and floor space as other models (i.e. SK60IV) in addition to being a short swing radius machine
- Front window slides open, up and out of the way. The bottom piece of glass is removable and easily stored
- Low noise and vibration levels due to encapsulated liquid-viscous floor plate mounts

Suspension Seat by KAB

The operator's seat is 7-way adjustable with a dual slide mechanism that allows the operator to adjust the seat in relation to the travel levers, the console-mounted joysticks and controls separately. Any operator can be made comfortable.

Climate Control

The operator sets the desired temperature and the air conditioning unit automatically maintains it. Thoughtfully placed vents are located at foot level, chest level, and to the rear. An additional vent can be used as a defroster at the front right.

12 Volt Converter

Most optional plug-in equipment is capable of running off this standard feature in all Kobelco excavators.

70SR

Gauge Cluster

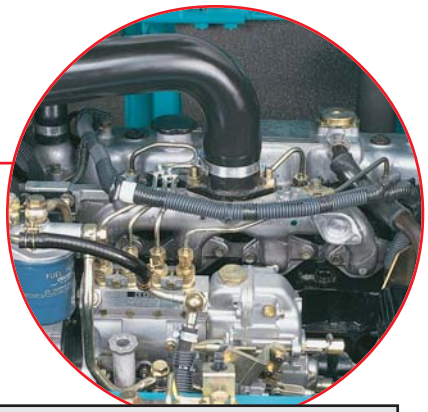
The 70SR Gauge Cluster contains the following lamps, gauges and indicators:

- Work mode indicator lamp: tells whether machine is in "H", "S", or "FC" mode
- Engine coolant temperature gauge
- Fuel level gauge
- Monitor/warning lamps: engine oil pressure, engine coolant temp, battery charge, engine preheat, two speed travel, fuel level, air cleaner restriction, CPU, swing parking brake release

E.A.C.S. — Electronic Active Control System.

E.A.C.S. permits precise control of the engine and hydraulic system automatically. A state-of-the-art computer controls the engine and pumps so that they work together and respond automatically to the operator's commands. High and low pressure sensors work in conjunction with the engine speed sensor to determine what the operator is demanding from the machine and what the current machine status is. Based on feedback from these sensors, the computer effectively tailors the output of the main pumps to maximize productivity.

- Precise Fine Control
- Auto Engine Deceleration
- High Horsepower on Demand



ENGINE

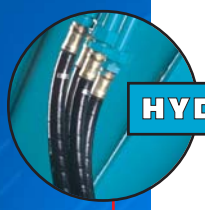
The heart of any machine is it's power source, and the 70SR is powered by the proven reliability of the Isuzu 4-cycle diesel engine, with an impressive 54 net horsepower and 169 cubic inch displacement. The Isuzu powerplant features direct fuel injection which translates into excellent power and fuel economy. Specs include:

- Isuzu A-4JB1
- Direct injection, water cooled 4-cylinder, 4-cycle diesel
- 169 cu. in. (2.77 liters) displacement
- 54 HP(40.4 KW) @ 2,100 rpm; SAE NET
- Good fuel economy
- Durable, long life
- Meets worldwide emission standards

PERFORMANCE

Bucket capacity (SAE heaped)	0.23~0.53 yd³ (0.18~0.40 m³)
Travel speed	3.4/2.1 mph (5.3/3.4 km/h)
Swing speed	12.5 rpm
Gradeability	35˚ (70%)
Drawbar pulling force	14,500 lbs (6,591 kg)

FEATURES



HYDRAULICS

Kobelco has designed an innovative new hydraulic system for the 70SR which provides impressive efficiency in both horsepower and fuel consumption. Kobelco's ingenious E.A.C.S. system maximizes performance by instantly matching power to the needs of the operator in any situation. The result is a 7-ton machine with smooth, responsive and seamless control.

Pumps

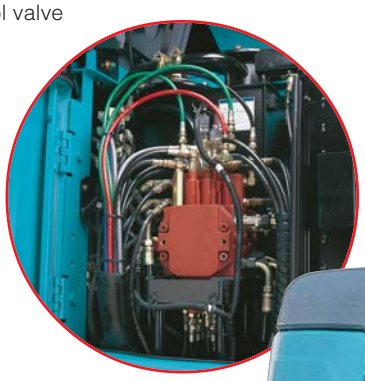
- Two variable displacement piston pumps mount directly to the engine without gear boxes
- A dedicated pump for the dozer blade circuit permits operating the dozer blade while traveling without affecting travel performance
- Gear-type pilot pump is mounted at the end of the main pumps

Cylinders

- Boom hoist cylinder equipped with a rod side cushion
- Arm cylinder equipped with cushions on both the rod and head sides of the cylinder

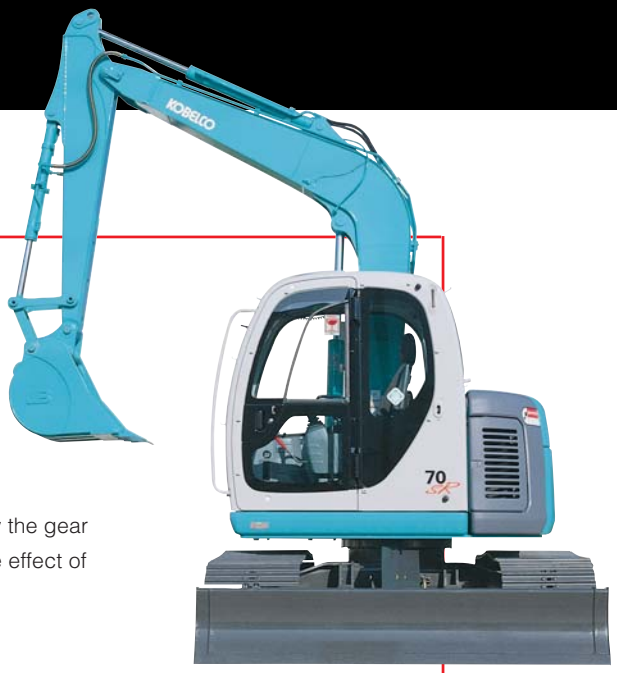
Main Control Valve

- Six main spool valves form the main control valve
- Boom and arm confluent circuits permit double pump flow to boom during high production cycling for increased speed and productivity
- Both boom and arm circuits have holding valves (anti-drift valves) built in. These valves minimize attachment drift allowing the attachment to maintain a position for long periods of time.



HYDRAULIC SYSTEM

Pump	2 variable displacement
Max discharge flow	2 x 17.4 US gal/min (2 x 66 lit/min)
Max discharge pressures:	
Boom, arm & bucket	4,270 psi (300 kg/cm^2)
Propel circuit	4,270 psi (300 kg/cm^2)
Blade circuit	2,845 psi (200 kg/cm^2)
Control circuit	500 psi (35 kg/cm^2)
Swing pressure	3,560 psi (250 kg/cm^2)
Control valves	6 spool



SWING SYSTEM

The effectiveness of a machine's swing system defines it's capability, and the 70SR's true Zero Tail Swing design redefines the effectiveness of the whole 7-ton class. By borrowing technology from their highly acclaimed cranes, Kobelco excavators incorporate a swing system that provides smoother starts and stops, and more precise bucket placement with a **Swing Shockless Valve**. This valve greatly reduces the rebound caused by the gear train backlash of the swing system by absorbing and dampening the effect of each rebound.

True "Zero Tail Swing"

In the case of the 70SR the tail swing radius is so small that the counterweight of the machine never extends past the width of the tracks when the upper frame is rotated through a complete swing arc. This is particularly advantageous when working in tight places. Whether operating in the street close to traffic, near the wall of a building or any other typical work site obstruction, the rear of the machine is safe from collision from any of these objects.

Variable Swing Priority

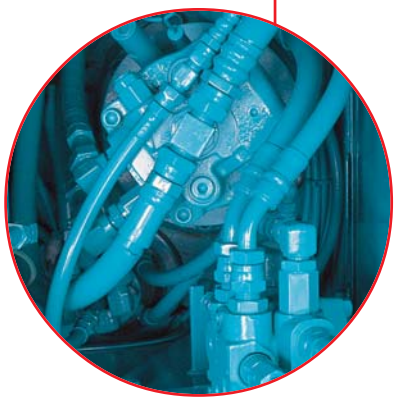
Variable swing priority provides excellent swing control during simultaneous operations with the arm and bucket.

Improved Operator Confidence

Operators can concentrate more on moving material and worry less about safety considerations or swinging the tail into something. This allows for a more relaxed and comfortable operator, improving his/her efficiency and productivity. With such a small working width, this machine operates where few others in this weight class can in extremely limited and confined spaces. Even with zero tail swing, the lifting capacity of the 70SR is actually better than that of the SK60IV.

Minimal Front Swing Radius

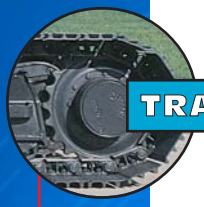
The 70SR also has a very short front swing radius. The combination of a short front swing radius and a zero tail swing radius allows this machine to complete a swing-dumping operation within a 9'7" width. This working width is more commonly seen on a 3 ton mini excavator.



Auto-Swing Brake

The parking brake is automatically spring applied and hydraulically released. Loads are automatically held in position while working on the side of a hill.

FEATURES



TRAVEL SYSTEM

The travel system aboard the 70SR is among the fastest and most sophisticated in the industry. A fast travel speed of 3.4 mph, combined with Kobelco's rugged construction standards make for one of the most productive excavators around.

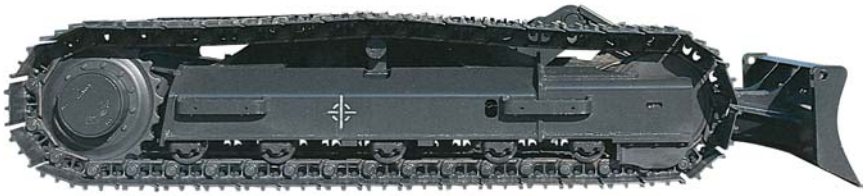
Straight Propel System

The flow from two hydraulic pumps is logically directed to allow fast speeds when traveling, and unerringly straight travel while operating attachments. This **Straight Propel System** ensures straight line travel when using other functions, making jobs like pipe laying much easier and more productive.

Two Speed Travel

"Turtle" mode permits low speed and high torque, perfect for dozing operations. "Rabbit" mode provides high speed to get you across the jobsite quickly.

Undercarriage



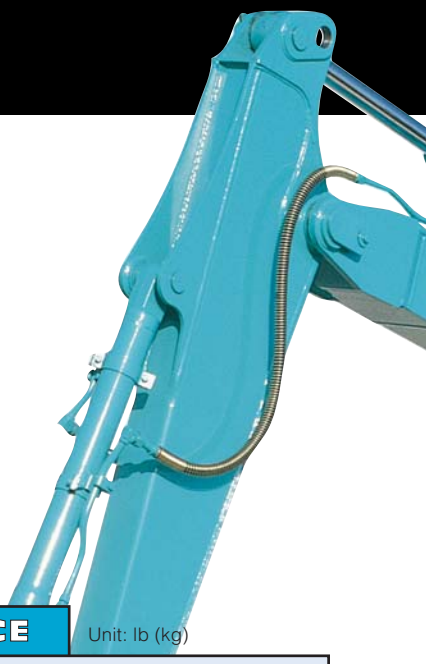
Travel motors are true two speed hydraulic, axial piston motors. The travel system is designed for excellent speed and drawbar performance. Both travel motors contain automatic, spring applied, hydraulically released parking brakes. The 70SR's crawler side frames are 6” wider and 4” longer than the previous model (SK60IV), adding 1,600 more pounds to the operating weight. The increased width, length and weight of the 70SR all add to the machine's effective productivity, putting it at the head of the 7-ton class.

70SR

BOOM, ARM & BUCKET

As you would expect from Kobelco, the boom, arm and bucket assemblies are built for aggressive and demanding uses. An array of features provides the operator with exceptional bucket and attachment speed and control:

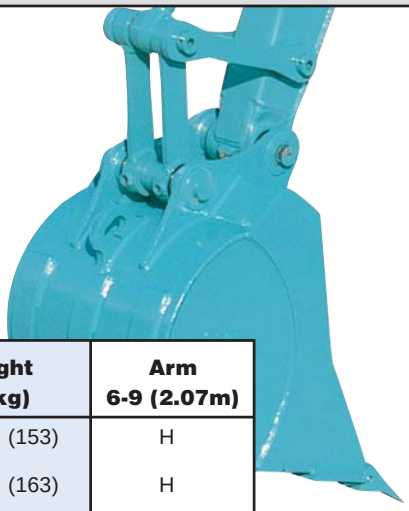
- Bucket capacities are large and breakout is at impressively high forces
- The boom is designed as a box-section structure to provide maximum strength and durability
- Anti-drift valves on both the boom and arm help prevent attachment drift
- Confluence circuits on both the boom and arm allow two-pump flow when needed, increasing attachment speed
- A single high-wattage work light is mounted on the left side of the boom for strong lighting coverage during night or low-light work
- Boom and arm are built with high performance, graphite impregnated and centered bushings that extend greasing intervals to 250 hours
- A standard rock guard is mounted to the bottom plate of the arm to protect the base plate against wear and damage that may occur while digging
- Cushions smooth out attachment operations by reducing the shock at the end of the cylinder stroke, reducing attachment generated noise and improving cylinder life.



DIGGING FORCE

Unit: lb (kg)

ARM LENGTH ft-in (m)	6-9	(2.07)
Bucket digging force	11,903	(5,400)
Arm crowding force	7,718	(3,500)

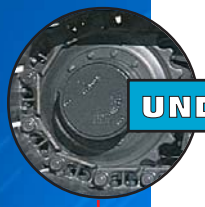


BUCKET SELECTION CHART

Bucket Duty	Capacity (SAE) Cubic Yard (m^3)	Width Inches (m)	Weight lb (kg)	Arm 6-9 (2.07m)
General Purpose	0.23 (.175)	18 (.457)	337 (153)	H
	0.26 (.198)	20 (.508)	360 (163)	H
	0.33 (.252)	24 (.609)	400 (182)	H
	0.43 (.328)	30 (.762)	459 (209)	M
	0.53 (.405)	36 (.914)	537 (244)	L
Heavy Duty	0.23 (.175)	18 (.457)	454 (206)	H
	0.26 (.198)	20 (.508)	476 (216)	H
	0.33 (.252)	24 (.609)	527 (240)	M
	0.43 (.328)	30 (.762)	641 (291)	L
	0.53 (.405)	36 (.914)	737 (335)	X

H Used with material weight up to 3,000 lbs per cubic yard.
M Used with material weight up to 2,500 lbs per cubic yard.
L Used with material weight up to 2,000 lbs per cubic yard.
X Not recommended.

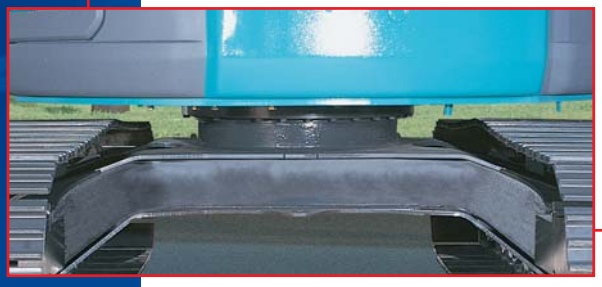
FEATURES

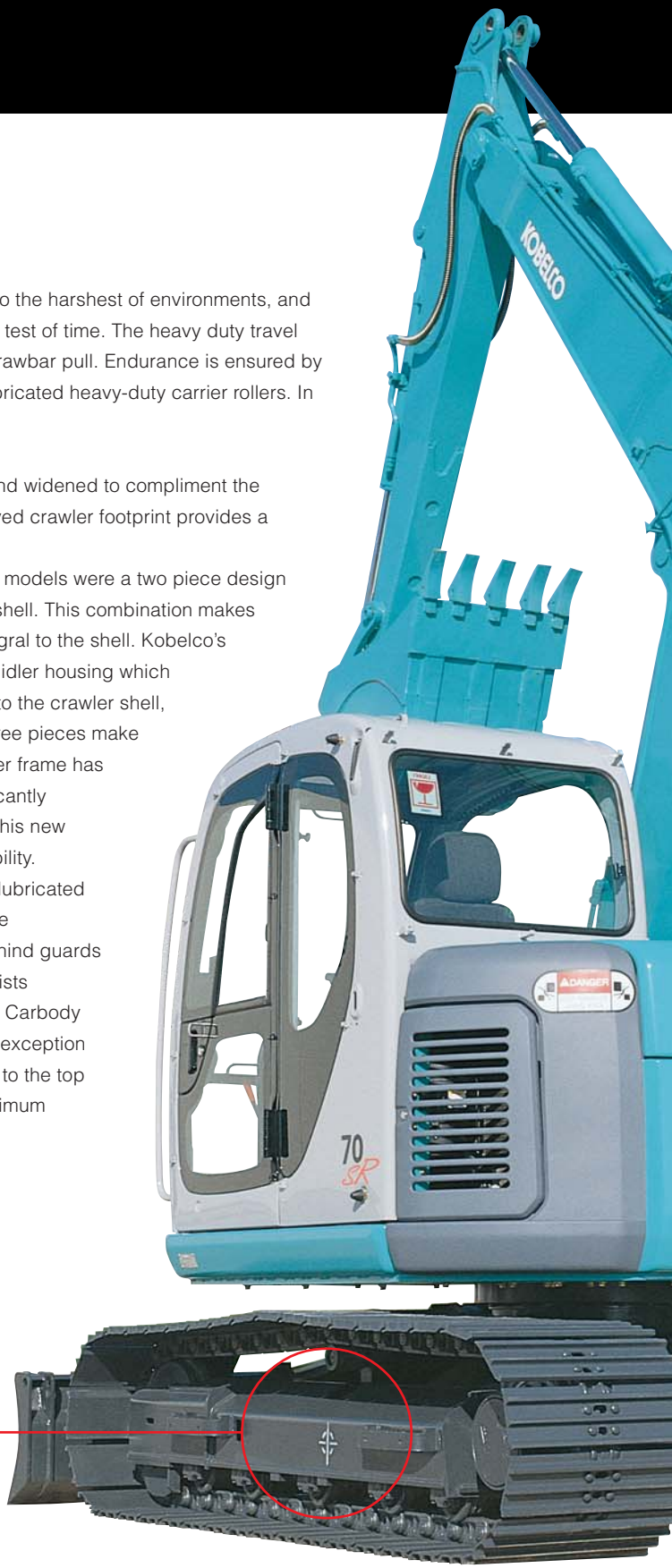


UNDERCARRIAGE

Kobelco knows that the undercarriage is exposed to the harshest of environments, and has designed their undercarriages to withstand the test of time. The heavy duty travel motors are designed for maximum durability and drawbar pull. Endurance is ensured by using a lubricated track link system and lifetime-lubricated heavy-duty carrier rollers. In short, the 70SR's undercarriage is built to last!

- The 70SR Crawler frame has been lengthened and widened to compliment the upper frame's short tail swing radius. The improved crawler footprint provides a balanced and stable machine.
- The crawler frame is a three piece design. Earlier models were a two piece design with a travel motor housing welded to a crawler shell. This combination makes up the crawler frame with the idler mounting integral to the shell. Kobelco's new three-piece design incorporates a separate idler housing which mounts to the idler. This housing is then welded to the crawler shell, as is the travel motor housing. Together these three pieces make up the new crawler frame. In addition, this crawler frame has been reinforced around the idler housing, significantly strengthening this area. The primary benefits of this new crawler design are increased strength and durability.
- Idlers, lower roller and carrier rollers are lifetime lubricated
- Track links are sealed and strutted giving long life
- Travel motors and components are protected behind guards
- Carbody design is a modified x-shape which resists distortion caused by severe traveling conditions. Carbody axles are welded to the crawler frames along an exception ally wide area, connecting from the bottom plate to the top surface of the crawler frame, thus providing maximum frame rigidity.





MAINTENANCE

Routine maintenance is a given with any hard-working machine, but Kobelco has designed the 70SR to keep maintenance headaches and downtime to a minimum. The sophisticated electronic diagnostics keep the operator alert to any potential problems, and traditional high maintenance areas have been designed for easy access.

Easy Access

The engine hood swings open easily and allows complete access for routine service checks. Engine oil level can be readily checked and all fuel and oil filters are easy to replace. The air cleaner is easy to inspect and replace. A lightweight but durable guard covers the fuel and hydraulic tanks as well as the main control valve and batteries. This lockable guard is very light and opens easily with your ignition/cab key.

REFILLING CAPACITIES

Unit: US gal (liters)

Fuel tank	22.5 (85)
Hydraulic capacity: system/tank	24/14.5 (95/55)
Cooling system	3.2 (12)
Engine oil pan	2.1 (8)
Travel reduction unit	2 x 0.45 (2 x 1.7)
Swing reduction unit	0.40 (1.5)
Swing gear grease bath	11 lbs (5 kg)

Electrical Diagnostics

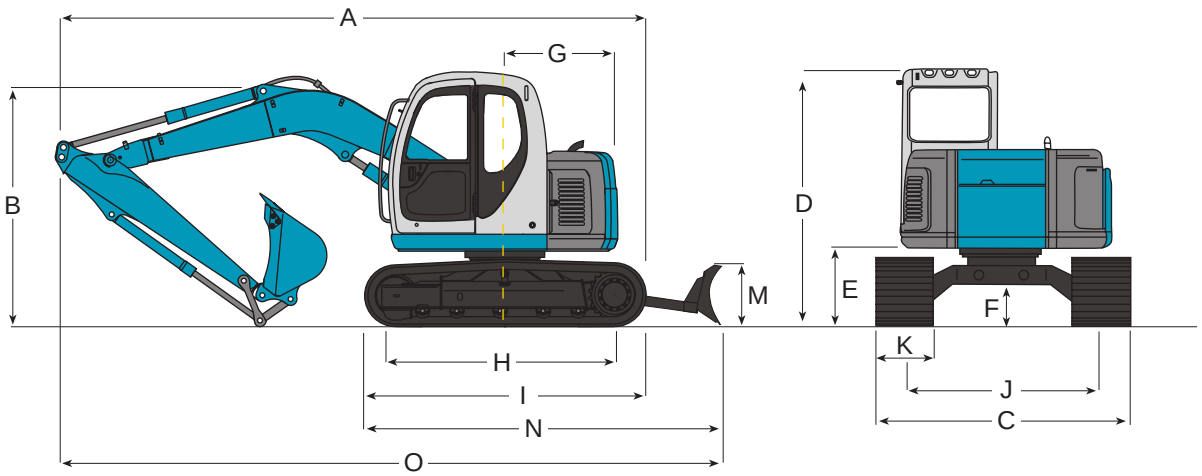
The 70SR is equipped with an electrical self-diagnostic function built into the controller. The cluster gauge has warning lights and buzzers to inform the operator about critical machine problems. If a failure occurs, an LCD display on the face of the controller will show a failure code related to whatever the failure is. This code can easily be crossed-referenced and the failure determined. The 70SR's diagnostic function can check up to thirty-six different items related to machine functions, an effortless way to quickly determine the condition of the machine and eliminate a lot of guess work in maintenance situations.

Easy Maintenance Radiator

The 70SR's radiator utilizes a waved fin design that deters clogging. A dust screen covers the front face of the oil cooler and greatly reduces the amount of particles allowed to pass through. This screen is easy to remove and clean. The space between the oil cooler and the radiator has been widened and makes for easy in place clean-out.

FEATURES

WEIGHTS & DIMENSIONS



WEIGHTS

Operating weight	16,400 lbs (7450 kg)
Ground pressure (600mm shoes)	3.4 psi (.24 kg/cm^2)

DIMENSIONS

Unit ft-in (m)

ARM LENGTH		6-9	(2.07)
A	Overall length	19-0	(5.79)
B	Overall height (to top of boom)*	8-6	(2.60)
C	Overall width	8-1	(2.47)
D	Overall height (to top of cab)*	8-6	(2.60)
E	Ground clearance of rear end*	29.5”	(1.01)
F	Ground clearance*	15”	(0.38)
G	Tail swing radius	3-10	(1.16)
H	Tumbler distance	7-4	(2.24)
I	Overall length of crawler	9-5	(2.86)
J	Track gauge	6-2	(1.87)
K	Shoe width	23.6”	(600 mm)
M	Height of blade	14”	(0.36)
N	Length of lower w/ blade	10-10	(3.30)
O	Transport length	20-5	(6.22)

* Excludes height of grouser bar.

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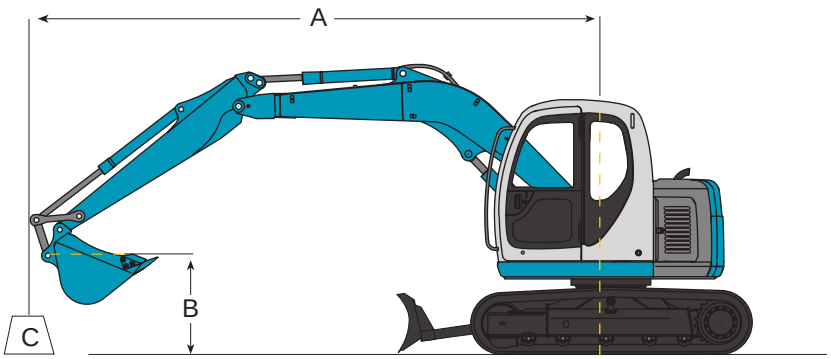


Rating over front

Rating over side/360 degrees

A Reach swing centerline to bucket hook

B Bucket hook height above/below ground

C Lifting capacities in pounds and kilograms

- Max discharge pressure: 4,270 psi (300 kg/cm²)
- Track shoe: 23.6" (600 mm) Triple grouser
- Boom: 12'2" (3.72 m)

LIFTING CAPACITIES

70SR Arm: 6'9" (2.07 m) Bucket: 0.29 yd³ (0.22 m³) SAE CECE 419 lb (190kg)

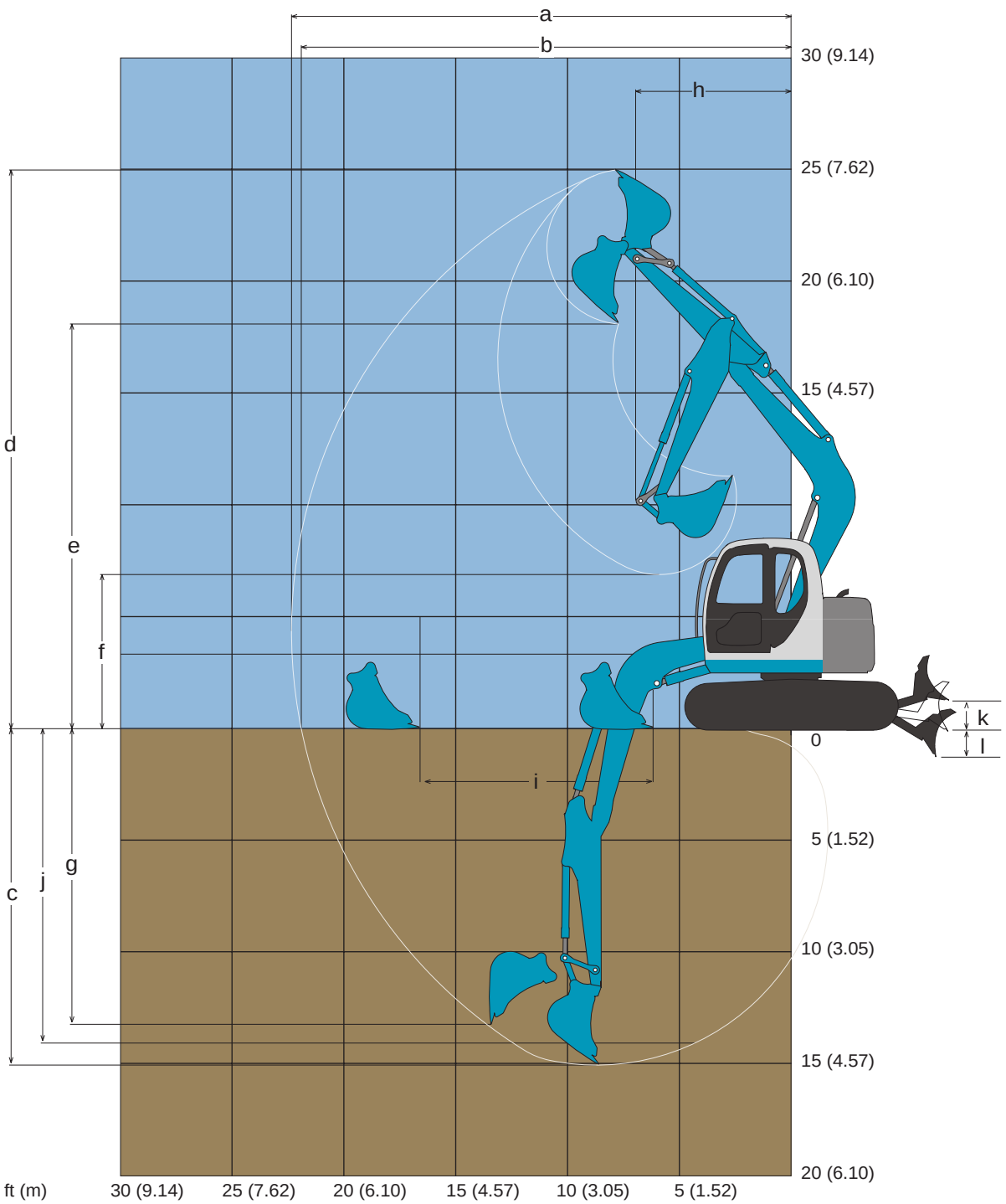
A / B / C		5' (1.5 m)		10' (3.0 m)		15' (4.6 m)	
		front	side	front	side	front	side
20' (6.1 m)	lb			*3400	*3400		
	kg			*1500	*1500		
15' (4.6 m)	lb					*3100	2700
	kg					*1400	1200
10' (3.0 m)	lb			*4900	*4900	*4000	2700
	kg			*2200	*2200	*1800	1200
5' (1.5 m)	lb			*6700	4800	*4600	2500
	kg			*3000	2200	*2100	1100
Ground Level	lb			*7700	4300	*4900	2300
	kg			*3500	1900	*2200	1000
–5' (–1.5 m)	lb	*8000	*8000	*7200	4200	*4500	2200
	kg	*3600	*3600	*3200	1900	*2000	1000
–10' (-3.0 m)	lb	*7700	*7700	*4800	4300		
	kg	*3500	*3500	*2100	1900		

Notes:

1. Do not attempt to lift or hold any load that exceeds these rated values at their specified load radii and heights.
2. Lifting capacities assume a machine standing on a level, firm, and uniform supporting surface. Operator must make allowance for job conditions such as soft or uneven ground, out of level conditions, side loads, sudden stopping of loads, hazardous conditions, inexperienced personnel, weight of various other buckets, lifting slings, attachments, etc.
3. Ratings at bucket lift hook.
4. The previous rated loads are in compliance with SAE Hydraulic Excavator Lift Capacity Standard J 1097. They do not exceed 87% of hydraulic lifting capacity or 75% of tipping load. Rated loads marked with an asterisk (*) are limited by hydraulic capacity rather than tipping load.
4. Operator should be fully acquainted with the operator's manual before operating this machine. Rules for safe operation of equipment should be followed at all times.
6. Capacities apply only to the machine as originally manufactured and normally equipped by KOBELCO America Inc.

FEATURES

WORKING RANGES



KOBELCO 70SR

It takes a true competitive edge to be profitable in today's construction market. A good idea is not always enough — it takes the right kind of company to bring it to life. Kobelco's new 70SR typifies the company's commitment to innovation, imagination, practicality and value to the customer. Contact your nearest dealer to learn firsthand what makes Kobelco ***"Your Competitive Edge."***

WORKING RANGES

Unit: ft-in (m)

ATTACHMENT		6-9	(2.07)
a	Max digging reach	22-0	(6.71)
b	Max digging reach at ground level	21-7	(6.57)
c	Max digging depth*	14-9	(4.52)
d	Max digging height*	24-7	(7.50)
e	Max dumping clearance*	17-9	(5.43)
f	Min dumping clearance*	6-9	(2.07)
g	Max vertical wall digging depth*	13-0	(3.97)
h	Min front swing radius	6-10	(2.09)
i	Horizontal digging stroke at ground level	10-4	(3.15)
j	Digging depth for 8' (2.4m) flat bottom	13-10	(4.22)
k	Max blade lift above ground	14"	(0.36)
l	Max blade drop below ground	9"	(0.23)

* Excludes height of grouser bar.

STANDARD EQUIPMENT

- Engine, Isuzu A-4JB1
- Working mode selector (Fine control mode, Standard mode, Heavy work mode)
- Straight travel system
- Automatic shift, two speed travel
- Travel alarm
- Automatic engine deceleration
- Lifetime lubricated track rollers, idlers and sprockets, grease cylinder track adjuster, track link disassembly mechanism, long pitch sealed and strutted track links
- Heavy duty batteries (2x12 volt-70AH)
- 24 to 12 volt converter
- Starting motor (24 v/3.2 KW), 30 Amp alternator
- Automatic climate control
- Hydraulic oil cooler
- Audible warning system for: high coolant temperature, low engine oil pressure, clogged air filter and oil replacement interval
- Automatic engine idle down for low oil pressure
- Electric horn
- Two front work lights
- Hydraulic track adjusters
- Automatic swing and travel parking brakes
- 7 way adjustable suspension seat
- Die formed, modular steel full-vision cab, rubber mounted, sound insulated, windshield wiper, adjustable reclining operator's seat with lap safety belt, heater and defroster, cigarette lighter, ashtray, floor mat, cab light, control lever lock, tinted skylight with damper cylinder.
- Multi-display monitor includes: system status, engine pre-heat status, low engine oil pressure warning, engine coolant temperature level warning, engine air cleaner restriction, battery charging system, low fuel level, CPU error indicator lamp, hour meter, fuel level and water temperature level gauges, 2-speed travel and swing release indicators.
- Boom and Arm anti-drift valves
- Swing shockless valve
- 23.6" (600 mm) semi-triple grouser shoes
- 12'2" (3.72 m) boom
- 6'9" (2.07 m) arm
- Dozer blade
- Two lever control for boom, arm, bucket and swing; pilot operated wrist controls and foot pedals

OPTIONAL EQUIPMENT

- Breaker auxillary valve and piping
- Nibbler/Breaker valve and piping
- 17.7" (450 mm) Rubber tracks
- Vandalism guards
- 22.8" (580 mm), 0.33 cu. yd. (.25 m^3) GP w/4 teeth
- Center track guide

NOTE: Due to our policy of continual product improvement, all designs and specifications are subject to change without advance notice.

KOBELCO

Your competitive edge.

Headquarters & Manufacturing
501 Richardson Rd.
Calhoun, Georgia 30701 USA
Phone: 706.629.5572
Fax: 706.629.3952

Sales & Product Support Offices
12755 S. Kirkwood
Stafford, Texas 77477 USA
Phone: 281.240.4800
Fax: 281.240.4906

70SR

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