

Hydraulic Excavators

ED160 Blade Runner

- Bucket Capacity :
0.50 m³ SAE Heaped
- Engine Power :
69.2 kW /2,000 rpm
(SAE NET)
- Operating Weight :
15,700 kg



Complies with the latest exhaust emission regulations



US EPA
Interim Tier IV



EU (NRMM)
Stage III B



Japanese
Regulations



Engine

Model	MITSUBISHI D04EG-74kW-01
Type	Direct injection, water-cooled, 4-cycle diesel engine With turbocharger, intercooler
No. of cylinders	4
Bore and stroke	94 mm x 120 mm
Displacement	3.331 L
Rated power output	69.2 kW /2,000 rpm (SAE NET)
Max. torque	359 N·m /1,600 rpm (SAE NET)



Hydraulic System

Pump	
Type	Two variable displacement pumps + 2 gear pump
Max. discharge flow	2 x 130L/min 1 x 20L/min 1 x 55L/min
Relief valve setting	
Boom, arm and bucket	37.8 Mpa
Dozer blade, angle and tilt	27.4 Mpa
Travel circuit	34.3 Mpa
Swing circuit	28.0 Mpa
Control circuit	5.0 Mpa
Pilot control pump	Gear type
Main control valves	8-spool
Oil cooler	Air cooled type



Swing System

Swing motor	Axial piston motor
Parking brake	Oil disc brake, hydraulic operated automatically
Swing speed	11.0 rpm
Swing torque	39.9 kN·m (SAE)
Tail swing radius	1,490 mm
Min. front swing radius	2,000 mm



Attachments

Backhoe bucket and arm combination

Use			Backhoe bucket							
			Normal digging							
Bucket capacity	SAE heaped	m ³	0.24	0.31	0.38	0.45	0.50	0.57	0.70	
	Struck	m ³	0.20	0.23	0.28	0.35	0.38	0.43	0.50	
Opening width	With side cutter	mm	590	700	800	915	1,000	1,100	—	
	Without side cutter	mm	500	600	700	815	900	1,000	1,150	
No. of bucket teeth			3	3	4	4	5	5	5	
Bucket weight			kg	280	300	340	360	380	400	410
Combinations	2.38 m arm		○	○	○	○	◎	△	△	
	2.84 m arm		○	○	◎	△	—	—	—	

◎ Standard ○ Recommended △ Loading only



Travel System

Travel motors:	2 x axial piston, two-speed motors
Parking brakes:	Oil disc brake per motor
Travel shoes:	40 each side
Travel speed:	4.8 / 2.4 km/h
Drawbar pulling force:	196 kN (SAE J 1309)
Gradeability:	70 % {35°}



Cab & Control

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



Boom, Arm & Bucket

Boom cylinder	100 mm x 1,092 mm
Arm cylinder	115 mm x 1,120 mm
Bucket cylinder	95 mm x 903 mm



Dozer Blade, Angle & Tilt

Dozer cylinder	114mm x 210mm	
Angle cylinder	102mm x 552mm	
Tilt cylinder	102mm x 127mm	
Dimension	3,260mm (width) x 815mm (height)	
Working range	Digging depth x Lift height	790mm x 600mm
	Maximum tilt height	445mm
	Maximum angle	25°



Refilling Capacities & Lubrications

Fuel tank	200 L
Cooling system	13 L
Engine oil	11.5 L
Travel reduction gear	2 x 2.1 L
Swing reduction gear	1.65 L
Hydraulic oil tank	85.2 L tank oil level 126.7 L hydraulic system



Working Ranges

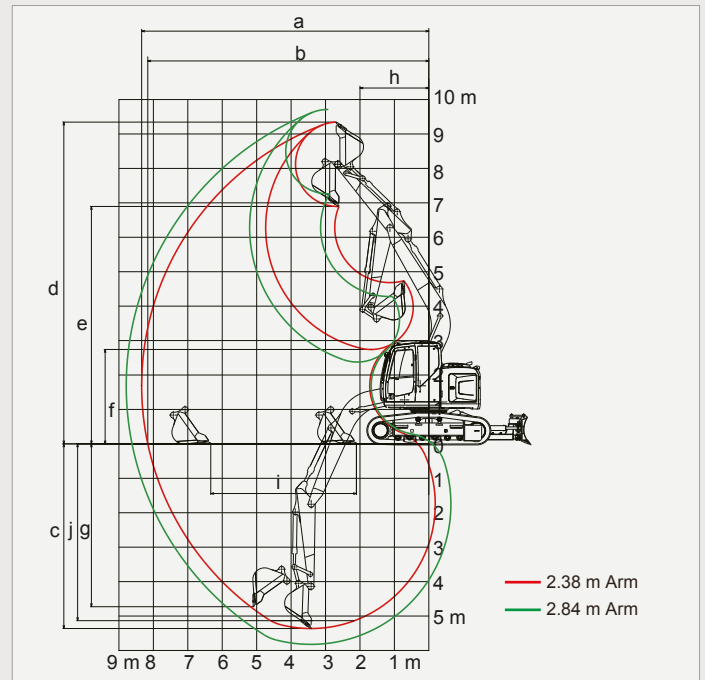
Unit: m

Boom		4.68m	
Range	Arm	2.38m	2.84m
a- Max. digging reach		8.34	8.78
b- Max. digging reach at ground level		8.16	8.61
c- Max. digging depth		5.36	5.82
d- Max. digging height		9.34	9.71
e- Max. dumping clearance		6.90	7.26
f - Min. dumping clearance		2.74	2.38
g- Max. vertical wall digging depth		4.73	5.29
h- Min. swing radius		2.00	2.40
i - Horizontal digging stroke at ground level		4.23	4.72
j - Digging depth for 8 feet flat bottom		5.13	5.63
Bucket capacity SAE heaped m ³		0.50	0.38

Digging Force

Unit: kN

Arm length		2.38m	2.84m
Bucket digging force	SAE	81.4	80.3
	ISO	90.1	89.3
Arm crowding force	SAE	62.3	56.7
	ISO	64.4	58.1



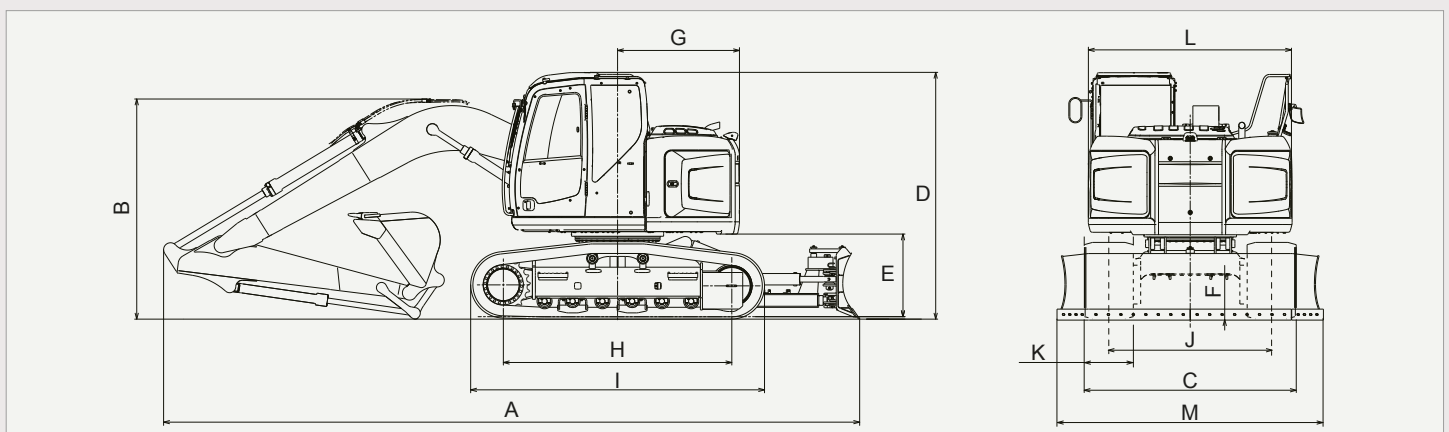
Dimensions

Arm length	2.38m	2.84m
A Overall length	8,530	8,620
B Overall height (to top of boom)	2,700	3,130
C Overall width of crawler		2,490
D Overall height (to top of cab)		3,030
E Ground clearance of rear end*		1,010
F Ground clearance*		455

Unit: mm

G Tail swing radius	1,490
H Tumbler distance	2,800
I Overall length of crawler	3,600
J Track gauge	1,990
K Shoe width	500
L Overall width of upperstructure	2,490
M Overall Width	3,260

* Without including height of shoe lug



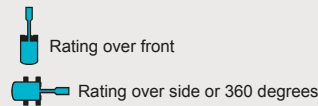
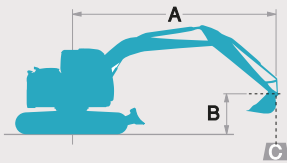
Operating Weight & Ground Pressure

In standard trim, with standard boom, 2.38m arm, 0.50m³ SAE heaped bucket

Shaped	Triple grouser shoes (even height)	
Shoe width	mm	500
Overall width of crawler	mm	2,490
Ground pressure	kPa	50
Operating weight	kg	15,700

Lifting Capacities

ED160 Blade Runner



A – Reach from swing centerline for bucket hook
 B – Bucket hook height above/below ground
 C – Lifting capacities in kilograms

ED160 Blade Runner		Arm: 7'10" {2.38m} Bucket: 0.65cu.yd. {0.50m ³ } SAE heaped 840 lbs {380kg} Shoe: 19.7" {500mm} Blade: Front side and Blade up										
B \ A	4'11" {1.5m}		9'10" {3.0m}		14'9" {4.5m}		19'8" {6.0m}		At Max. Reach		Radius	
24'7" {7.5m}	lb{kg}									*3,360{1,520}	*3,360{1,520}	13'8" {4.17m}
19'8" {6.0m}	lb{kg}					*6,580{2,980}	*6,580{2,980}			*2,790{1,260}	*2,790{1,260}	18'11" {5.77m}
14'9" {4.5m}	lb{kg}					*7,330{3,320}	7,260{3,290}	5,010{2,270}	4,330{1,960}	*2,660{1,210}	*2,660{1,210}	21'10" {6.65m}
9'10" {3.0m}	lb{kg}		*13,300{6,030}	13,060{5,920}	7,970{3,610}	6,710{3,040}	4,790{2,170}	4,130{1,870}	*2,750{1,250}	*2,750{1,250}	2,790{1,260}	23'4" {7.11m}
4'11" {1.5m}	lb{kg}		14,680{6,660}	11,300{5,120}	7,290{3,310}	6,100{2,760}	4,510{2,040}	3,860{1,750}	*3,040{1,380}	2,790{1,260}	2,850{1,290}	23'0" {7.02m}
G.L.	lb{kg}		13,920{6,310}	10,660{4,830}	6,840{3,100}	5,690{2,580}	4,290{1,950}	3,660{1,660}	3,320{1,500}	3,240{1,470}	2,850{1,290}	
-4'11" {-1.5m}	lb{kg}	*12,280{*5,570}	*12,280{*5,570}	13,880{6,300}	10,630{4,820}	6,690{3,030}	5,550{2,520}	4,220{1,910}	3,590{1,630}	3,780{1,710}	3,240{1,470}	21'2" {6.45m}
-9'10" {-3.0m}	lb{kg}	*18,720{*8,490}	*18,720{*8,490}	*14,010{6,350}	10,920{4,950}	6,820{3,090}	5,670{2,570}			5,130{2,320}	4,340{1,970}	17'8" {5.40m}

ED160 Blade Runner		Arm: 9'4" {2.84m} Bucket: 0.5 cu.yd. {0.38m ³ } SAE heaped 750 lbs {340kg} Shoe: 19.7" {500mm} Blade: Front side and Blade up											
B \ A	4'11" {1.5m}		9'10" {3.0m}		14'9" {4.5m}		19'8" {6.0m}		24'7" {7.5m}		At Max. Reach		Radius
24'7" {7.5m}	lb{kg}				*4,550{2,060}	*4,550{2,060}					*3,100{1,400}	*3,100{1,400}	16'1" {4.92m}
19'8" {6.0m}	lb{kg}				*5,550{2,510}	*5,550{2,510}	*4,040{1,830}	*4,040{1,830}			*2,610{1,180}	*2,610{1,180}	20'9" {6.33m}
14'9" {4.5m}	lb{kg}				*6,320{2,860}	*6,320{2,860}	4,950{2,240}	4,280{1,940}			*2,480{1,120}	*2,480{1,120}	23'5" {7.14m}
9'10" {3.0m}	lb{kg}		*11,200{5,080}	*11,200{5,080}	7,930{3,600}	6,690{3,030}	4,680{2,120}	4,030{1,830}	2,990{1,350}	2,570{1,170}	*2,520{1,140}	*2,520{1,140}	24'10" {7.57m}
4'11" {1.5m}	lb{kg}		14,770{6,700}	11,410{5,170}	7,170{3,250}	6,000{2,720}	4,350{1,970}	3,720{1,690}	2,860{1,290}	2,450{1,110}	2,730{1,240}	2,340{1,060}	25'2" {7.68m}
G.L.	lb{kg}		13,600{6,170}	10,440{4,730}	6,620{3,000}	5,500{2,490}	4,080{1,850}	3,470{1,570}			2,770{1,250}	2,370{1,070}	24'6" {7.48m}
-4'11" {-1.5m}	lb{kg}	*10,430{4,730}	*10,430{4,730}	13,360{6,060}	10,240{4,640}	6,380{2,890}	5,280{2,390}	3,950{1,790}	3,350{1,520}		3,110{1,410}	2,650{1,200}	22'9" {6.95m}
-9'10" {-3.0m}	lb{kg}	*16,100{7,300}	*16,100{7,300}	13,580{6,160}	10,420{4,730}	6,420{2,910}	5,320{2,410}	4,040{1,830}	3,430{1,550}		4,040{1,830}	3,440{1,560}	19'8" {6.m}
-14'9" {-4.5m}	lb{kg}			*9,430{4,280}	*9,430{4,280}						*6,030{2,730}	*6,030{2,730}	14'2" {4.33m}

- Do not attempt to lift or hold any load that is greater than these lift capacities at their specified lift point radius and heights. Weight of all accessories must be deducted from the above lift capacities.
- Lift 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.
- Bucket lift hook is defined as lift point.
- The above lifting capacities are in compliance with SAE J/ISO 10567. They do not exceed 87 % of hydraulic lifting capacity or 75 % of tipping load. Lifting 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.
- Lift capacities apply to only machines as originally manufactured and normally equipped by KOBELCO CONSTRUCTION MACHINERY CO., LTD.

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