

E145C HYDRAULIC EXCAVATOR



1. ENGINE TIER 3

Type	Water-cooled, 4-cycle diesel, 4-cylinder in line, High pressure common rail system (electric control), Turbocharger with air cooled intercooler.	
Model	ISUZU GJ-4JJ1X	
Rated flywheel horse power (SAE J1349, ISO 9249)	70.9 kW at 2000 min ⁻¹ (rpm)	
(ISO 14396)	73.0 kW at 2000 min ⁻¹ (rpm)	
Piston displacement	2999 cc	
Maximum torque (SAE J1349, ISO 9249)	340 N-m at 1600 min ⁻¹ (rpm)	
(ISO 14396)	346 N-m at 1600 min ⁻¹ (rpm)	
Bore and stroke	95.4 mm X 104.9 mm	
Voltage	24 V	
Alternator	50 Amp	
Starter	24 V 4.0 kW	

2. HYDRAULIC SYSTEM

Main pumps	2 variable displacement axial piston pumps with regulating system	
• Max. oil flow	2 X 129 liter/min at 2000 min ⁻¹	
• Working circuit pressure	34.3 MPa	
• Boom/Arm/Bucket	36.3 MPa with auto power up	
• Swing circuit	27.9 MPa	
• Travel circuit	34.3 MPa	
Pilot pump	1 gear pump	
(1) Max. oil flow	20 liter/min	
(2) Working circuit pressure	3.9 MPa	

Control valves

With Boom/Arm holding valve
One 4-spool valve for Right track travel,
Bucket, Boom and Arm acceleration
One 5-spool valve for Left track travel,
Auxiliary, Swing, Boom acceleration and Arm

Swing device

- Motor Fixed displacement axial piston motor
- Brake Mechanical disc brake
- Final drive Planetary gear reduction
- Turn table bearing Ball bearing type with internal gear
- Maximum swing speed 14.1 min⁻¹ (rpm)
- Swing torque 33,000 N-m

Cylinders

- NO. of cylinders – bore X Rod diameter X Stroke
- Boom 2 – Ø 105 mm X Ø 70 mm X 961 mm
 - Arm 1 – Ø 115 mm X Ø 80 mm X 1108 mm
 - Bucket 1 – Ø 95 mm X Ø 65 mm X 881 mm

3. HYDRAULIC CONTROLS

Boom/Arm/Bucket/Swing	Pilot pressure control system (ISO control pattern)
Travel	Pilot pressure control system
Work mode select	
• SP – mode	
• H – mode	
• Auto – mode	
Travel mode select (2-speed travel)	
Attachment cushion control	
Hydraulic lock (gate lock, left side tilt console)	

4. ELECTRICAL SYSTEM

Engine control

- Dial type throttle control
- One touch idle / Auto deceleration / Auto idle shutdown system
- Emergency stop

Monitor system

- Message display (Caution, condition, etc...)
- Work mode display (SP, H, Auto)
- Machine condition (Power boost, etc...)
- Alarm display and buzzer
- Water temperature
- Hydraulic oil temperature
- Fuel level
- Diagnosis system

Wire harness

Waterproof type connector

Safety

- Travel alarm
- Double horn

• Battery 2 X 12 V 100 Ah / 20 HR

Lights

- | | | |
|------------------|-------|---------------|
| • Working light | Upper | 24 V 70 W X 1 |
| | Boom | 24 V 70 W X 2 |
| | CAB | 24 V 70 W X 2 |
| • Operator's cab | Room | 24 V 10 W X 1 |

5. OPERATOR ENVIRONMENT

Operator's cab

- Smooth and round shape design cab, fabricated by press work
- Safety glass for all windows
- Shock-less cab suspension by 4-point fluid mounting
- Sliding front window with auto lock
- Built-in type full-color LCD monitor display
- Membrane switch on monitor display
- Windshield wiper & washer
- AM/FM Radio with auto-tuner
- Floor mat
- Polycarbonate roof hatch & Sun shade
- Auto air conditioner
- Roll-over protective structure (ROPS)
- Top guard OPG level 1 (in CAB structure)

Operator's seat

Low frequency mechanical suspension with helical springs and double acting hydraulic damper. (Achieves ISO7096 in category EM6)

- With following features
- Manual weight adjustment
- Backrest angle adjustment
- Seat height adjustment
- Adjustable pivoting armrests linked to consoles
- Adjustable headrest
- Retractable seat belt
- Adjustable lumbar support
- Control consoles adjust independently of seat

Others

- Rear view mirror (Cab side & Right side)

6. UNDERCARRIAGE

Travel motor	Variable displacement axial piston motor
Brake	Mechanical disc brake
Hydraulic service brake	Brake valve
Final drive	Planetary gear reduction
Travel speeds	
• High	5.6 km/h (Automatic travel speed shifting)
• Low	3.4 km/h
Drawbar pull	117 KN
Number of carrier rollers	2 (each side)
Number of track rollers	7 (each side)
Number of shoes	46 (each side)
Type of shoe	Triple grouser shoe
Link pitch	171.5 mm
Width of shoe	600 mm (STD)
Grade-ability	70% (35°)

7. MASS

Operating mass

12,900 kg with 2.50 m Arm, 0,64 m³ Bucket, 600 mm grouser shoe, operator, lubricant, coolant and full fuel tank

Counter weight mass 2,200 kg

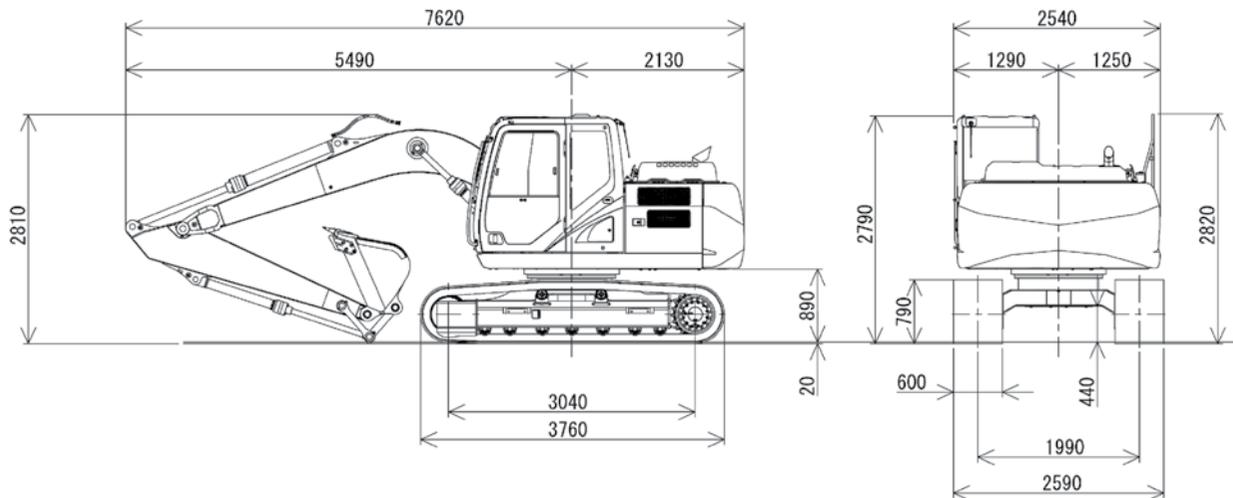
Ground pressure 0.032 MPa
(with 2.50 m Arm, 0.64 m³ Bucket, 600 mm grouser shoe)

8. DIGGING FORCE

(ISO 6015)	(2.50 m Arm)	(3.00 m Arm)
Arm digging force	62 kN	56 kN
With auto power up	66 kN	60 kN
Bucket digging force	90 kN	90 kN
With auto power up	95 kN	95 kN

9. DIMENSIONS

	(2.50 m Arm)
Overall length (without attachment)	3880 mm
Overall length (with attachment)	7620 mm
Overall height (with attachment)	2810 mm
Cab height	2790 mm
Upper structure overall width	2540 mm
Swing (rear end) radius	2130 mm
Clearance height under upper structure	890 mm
Minimum ground clearance	440 mm
Wheel base (Center to center of wheels)	3040 mm
Crawler overall length	3760 mm
Track gauge	1990 mm
Undercarriage overall width (with 600 mm shoes)	2590 mm
Crawler tracks height	790 mm

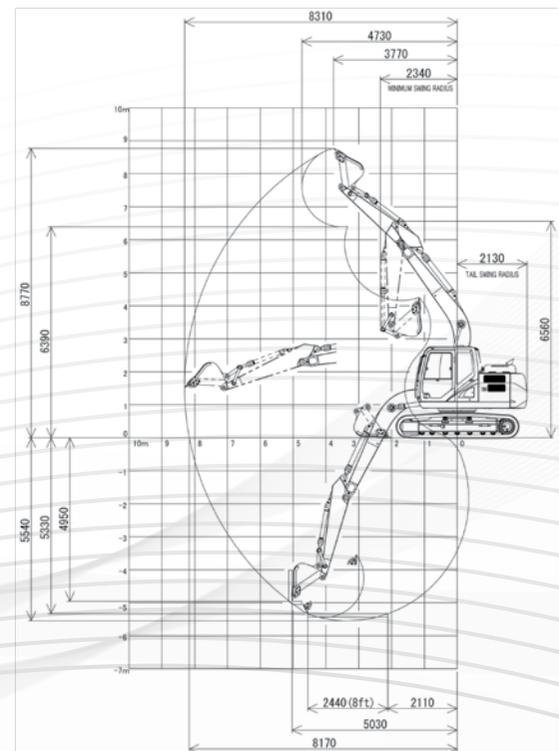


10. WORKING RANGES

	(2.50 m Arm)
Boom length	4630 mm
Bucket radius	1210 mm
Bucket wrist action	178°
Maximum reach at GRP	8170 mm
Maximum reach	8310 mm
Max. digging depth	5540 mm
Max. digging height	8770 mm
Max. dumping height	6390 mm

11. SYSTEM FLUID CAPACITIES AND SPECIFICATIONS

Capacities	Specifications	
Hydraulic system	157 liter	ISO VG 46
Hydraulic sump tank	82 liter	ISO VG 46
Fuel tank	260 liter	Light oil (Diesel)
Cooling system	16.2 liter	Coolant 50%, Water 50%
Final drive case (per side)	2.1 liter	API GL-4 90
Swing drive case	2.2 liter	API GL-5 90
Engine crank case (With Remote Oil Filter)	17.0 liter	API CD SAE 10W-30





E145^{EVO}C

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